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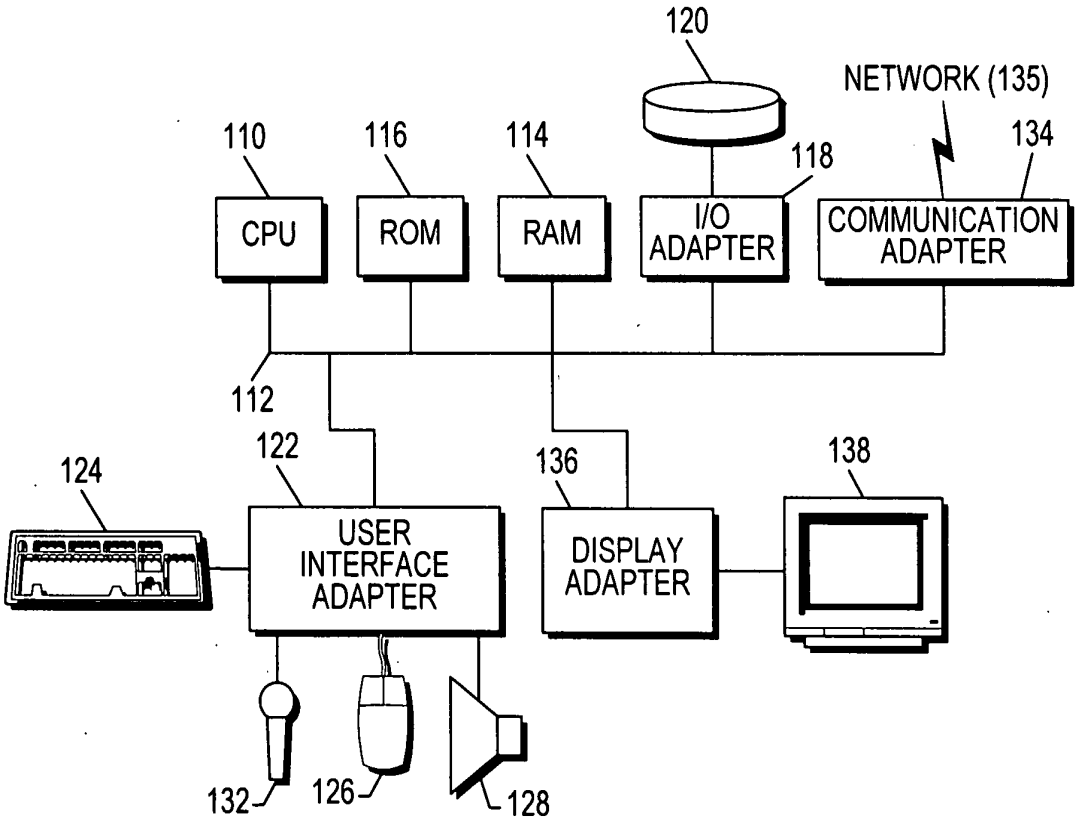

120
NETWORK (135)
110
116
114
118
134
CPU
ROM
RAM
I/O ADAPTER
COMMUNICATION ADAPTER
112
122
124
136
138
USER INTERFACE ADAPTER
DISPLAY ADAPTER
132
126
128

Figure 1

09621-0E2TA1SG

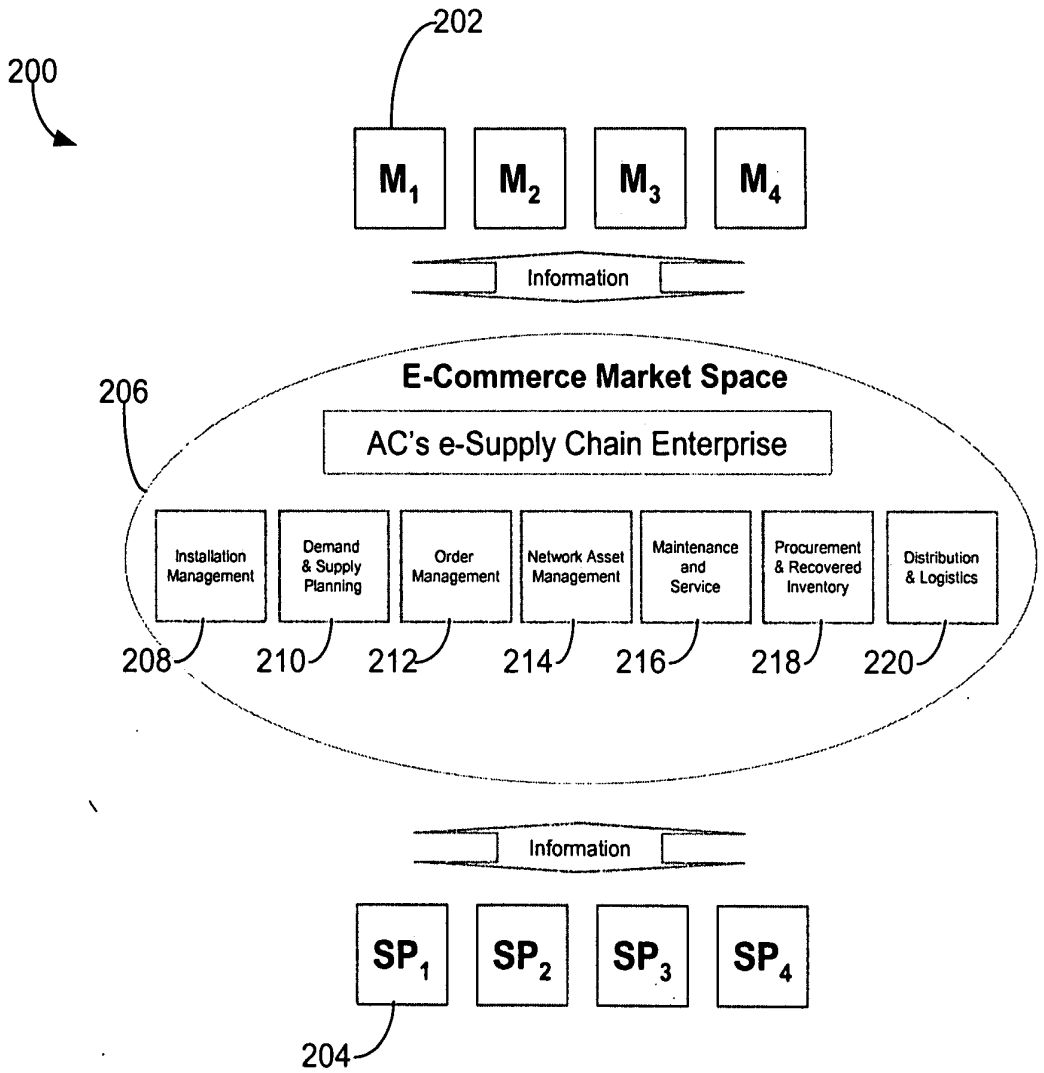


Figure 2

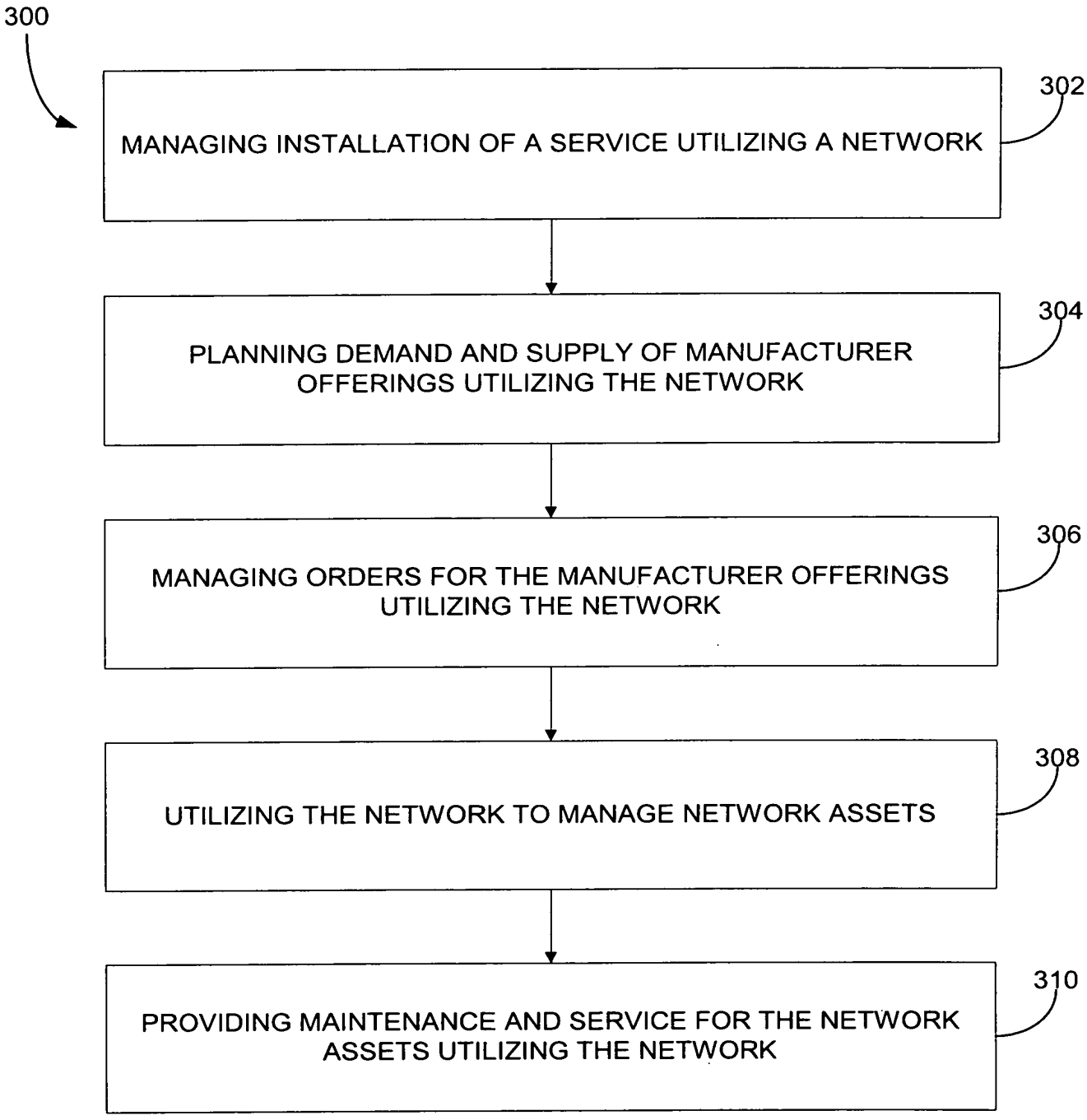

300
MANAGING INSTALLATION OF A SERVICE UTILIZING A NETWORK
302
PLANNING DEMAND AND SUPPLY OF MANUFACTURER OFFERINGS UTILIZING THE NETWORK
304
MANAGING ORDERS FOR THE MANUFACTURER OFFERINGS UTILIZING THE NETWORK
306
UTILIZING THE NETWORK TO MANAGE NETWORK ASSETS
308
PROVIDING MAINTENANCE AND SERVICE FOR THE NETWORK ASSETS UTILIZING THE NETWORK
310

Figure 3

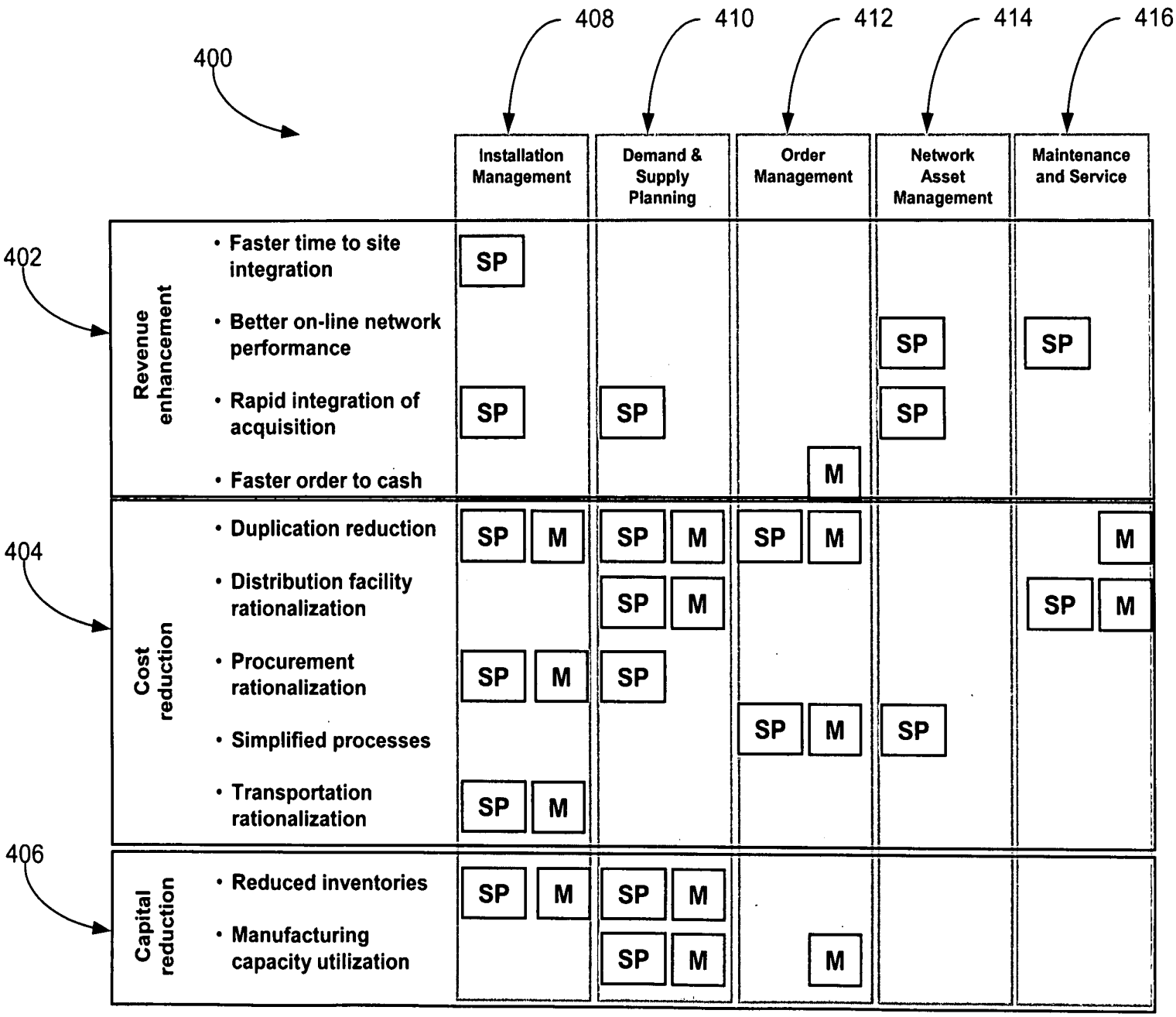

400
408
410
412
414
416
Installation Management
Demand & Supply Planning
Order Management
Network Asset Management
Maintenance and Service
402
Revenue enhancement
• Faster time to site integration
• Better on-line network performance
• Rapid integration of acquisition
• Faster order to cash
404
Cost reduction
• Duplication reduction
• Distribution facility rationalization
• Procurement rationalization
• Simplified processes
• Transportation rationalization
406
Capital reduction
• Reduced inventories
• Manufacturing capacity utilization
SP
M

Figure 4

DOCKET - DECRYPTED

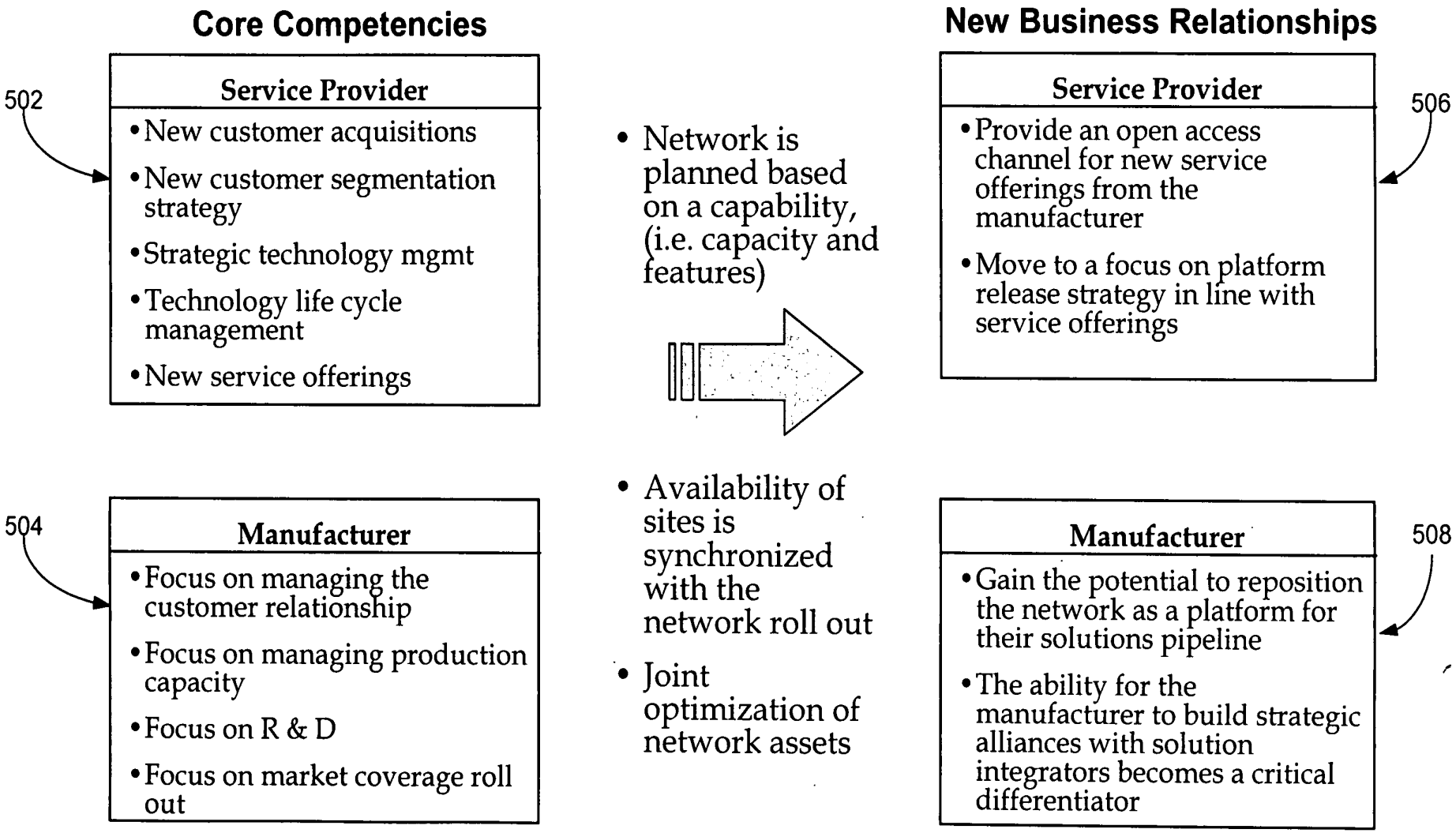


Figure 5

DOCKET - DEZTMED

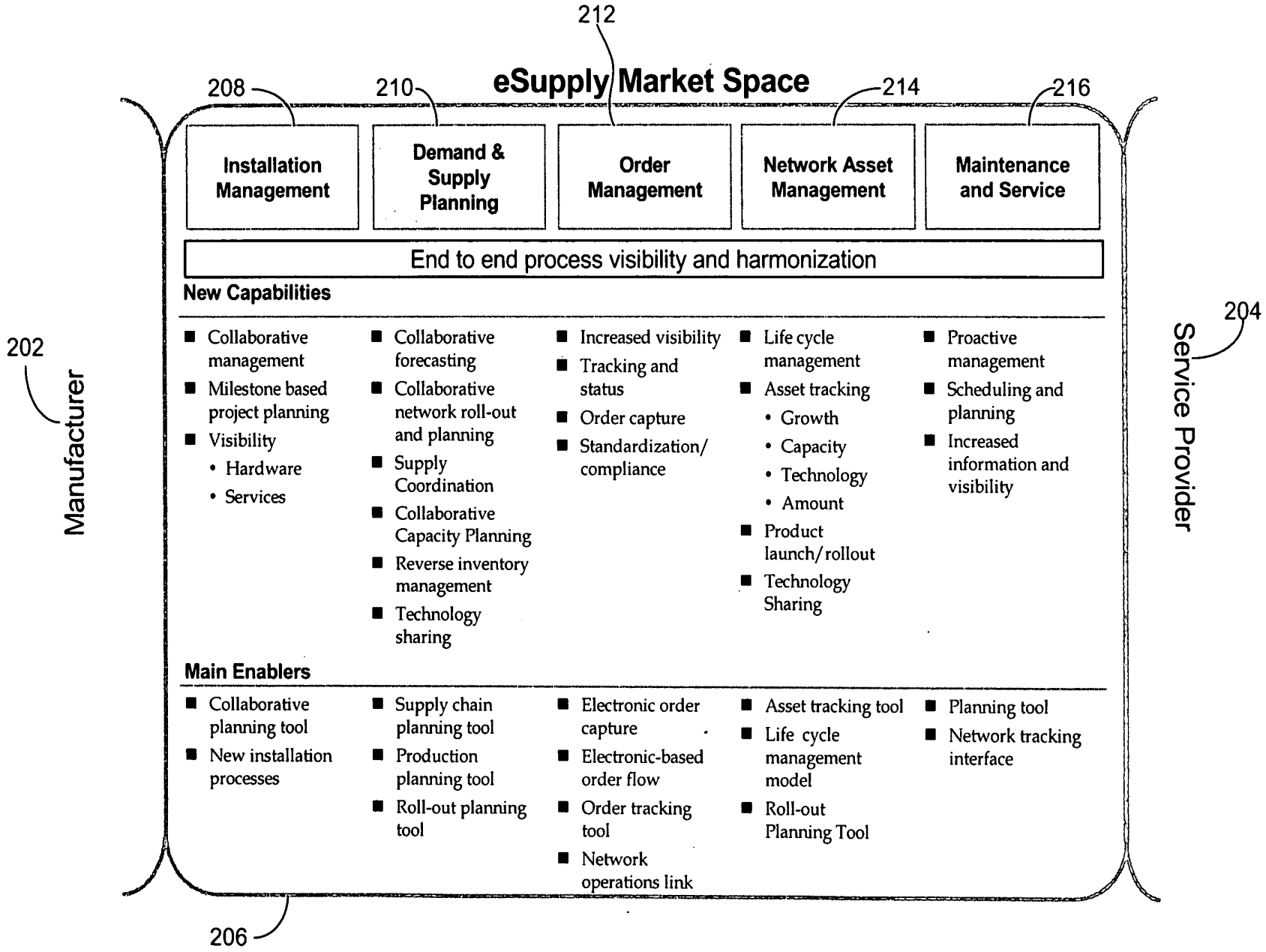


Figure 6

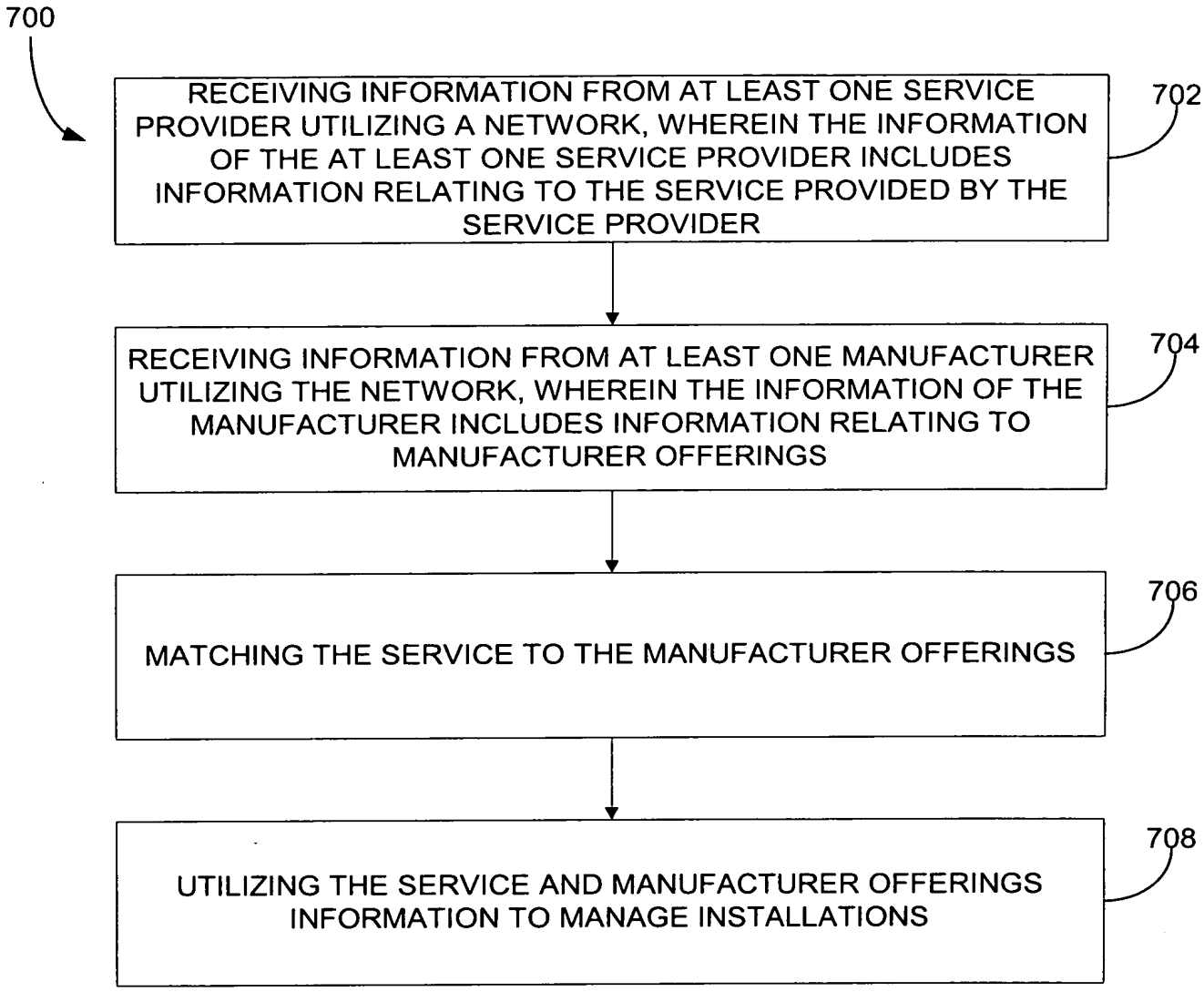

700
RECEIVING INFORMATION FROM AT LEAST ONE SERVICE PROVIDER UTILIZING A NETWORK, WHEREIN THE INFORMATION OF THE AT LEAST ONE SERVICE PROVIDER INCLUDES INFORMATION RELATING TO THE SERVICE PROVIDED BY THE SERVICE PROVIDER
702
RECEIVING INFORMATION FROM AT LEAST ONE MANUFACTURER UTILIZING THE NETWORK, WHEREIN THE INFORMATION OF THE MANUFACTURER INCLUDES INFORMATION RELATING TO MANUFACTURER OFFERINGS
704
MATCHING THE SERVICE TO THE MANUFACTURER OFFERINGS
706
UTILIZING THE SERVICE AND MANUFACTURER OFFERINGS INFORMATION TO MANAGE INSTALLATIONS
708

Figure 7

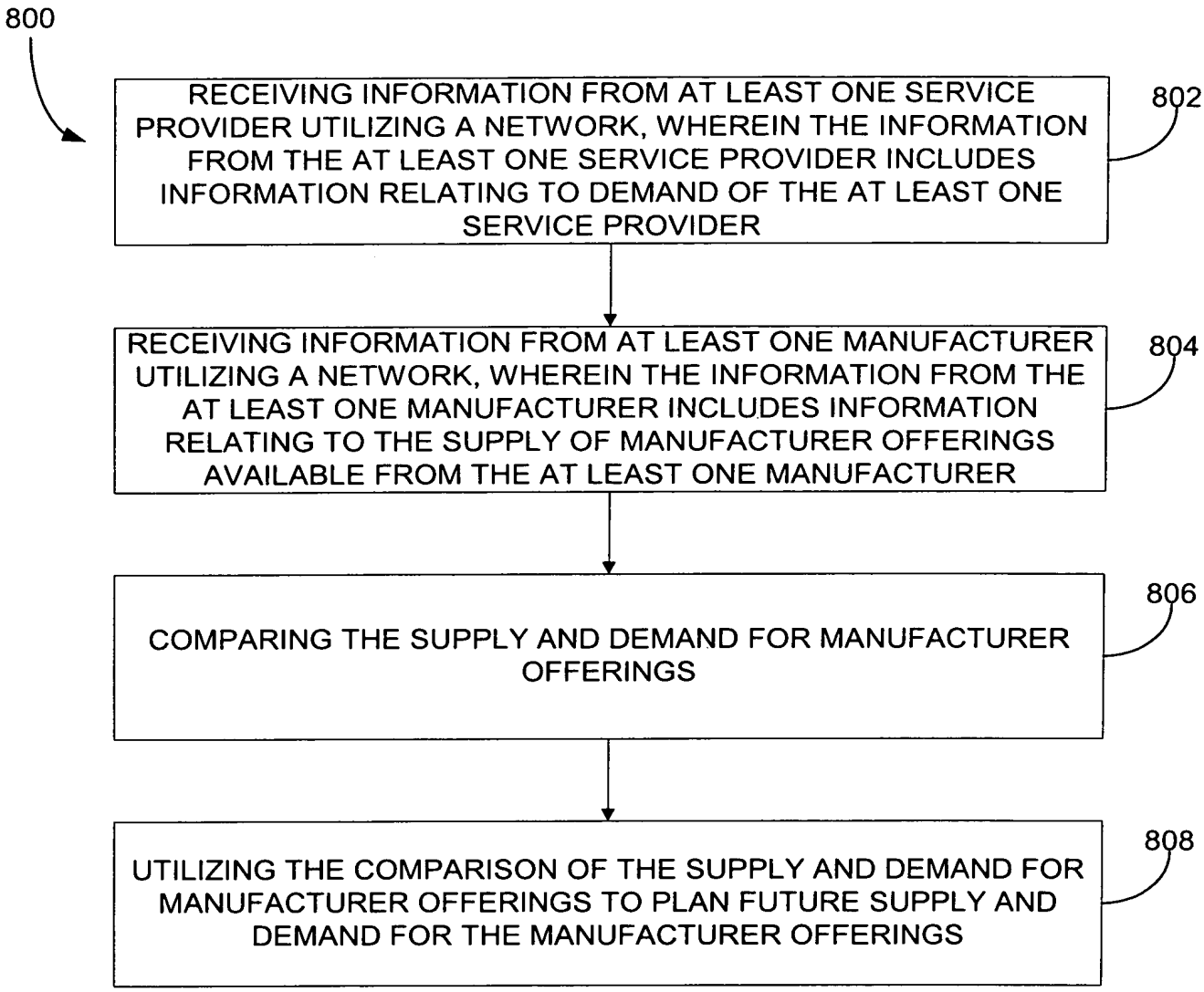

800
RECEIVING INFORMATION FROM AT LEAST ONE SERVICE PROVIDER UTILIZING A NETWORK, WHEREIN THE INFORMATION FROM THE AT LEAST ONE SERVICE PROVIDER INCLUDES INFORMATION RELATING TO DEMAND OF THE AT LEAST ONE SERVICE PROVIDER
802
RECEIVING INFORMATION FROM AT LEAST ONE MANUFACTURER UTILIZING A NETWORK, WHEREIN THE INFORMATION FROM THE AT LEAST ONE MANUFACTURER INCLUDES INFORMATION RELATING TO THE SUPPLY OF MANUFACTURER OFFERINGS AVAILABLE FROM THE AT LEAST ONE MANUFACTURER
804
COMPARING THE SUPPLY AND DEMAND FOR MANUFACTURER OFFERINGS
806
UTILIZING THE COMPARISON OF THE SUPPLY AND DEMAND FOR MANUFACTURER OFFERINGS TO PLAN FUTURE SUPPLY AND DEMAND FOR THE MANUFACTURER OFFERINGS
808

Figure 8

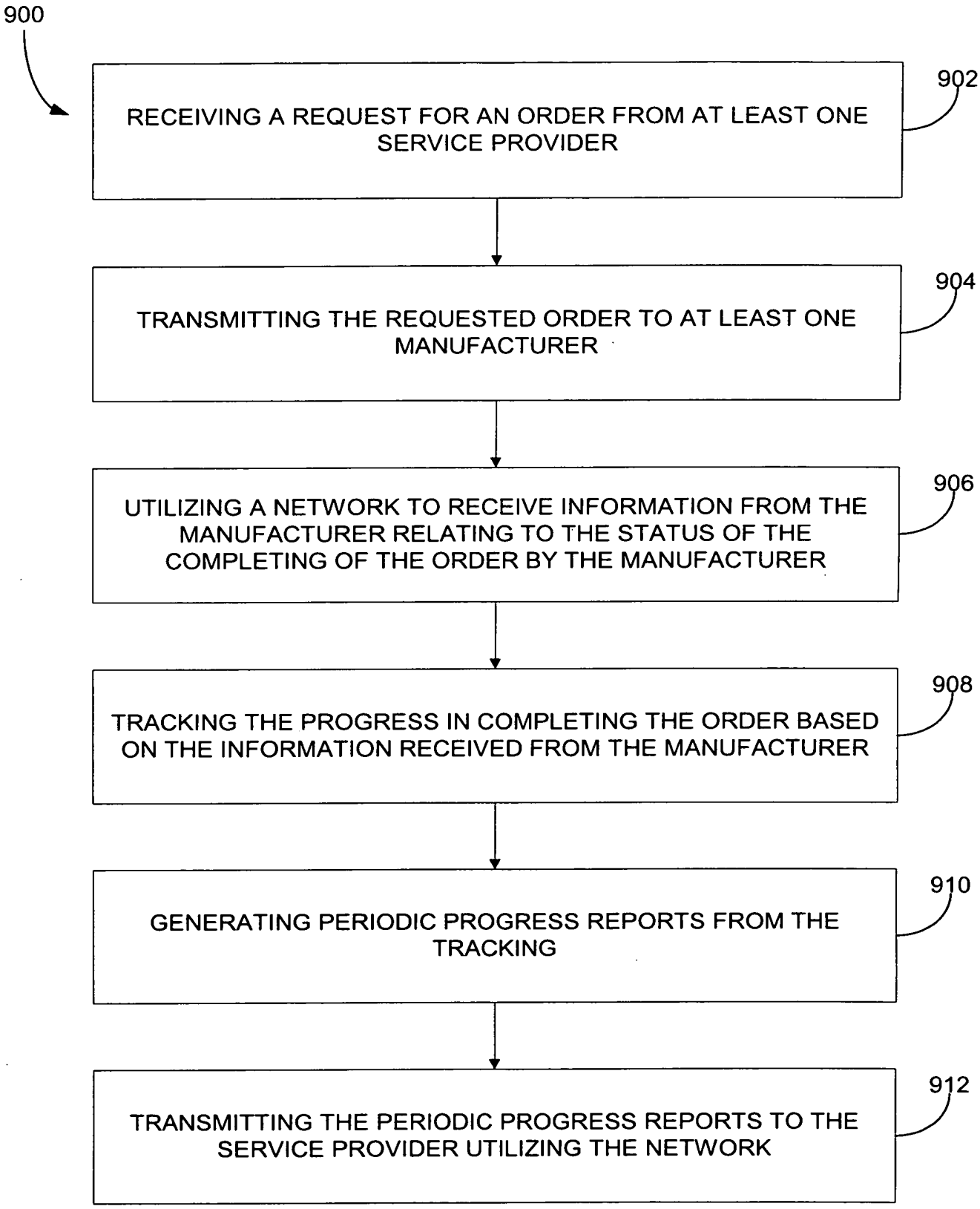

900
RECEIVING A REQUEST FOR AN ORDER FROM AT LEAST ONE SERVICE PROVIDER
902
TRANSMITTING THE REQUESTED ORDER TO AT LEAST ONE MANUFACTURER
904
UTILIZING A NETWORK TO RECEIVE INFORMATION FROM THE MANUFACTURER RELATING TO THE STATUS OF THE COMPLETING OF THE ORDER BY THE MANUFACTURER
906
TRACKING THE PROGRESS IN COMPLETING THE ORDER BASED ON THE INFORMATION RECEIVED FROM THE MANUFACTURER
908
GENERATING PERIODIC PROGRESS REPORTS FROM THE TRACKING
910
TRANSMITTING THE PERIODIC PROGRESS REPORTS TO THE SERVICE PROVIDER UTILIZING THE NETWORK
912

Figure 9

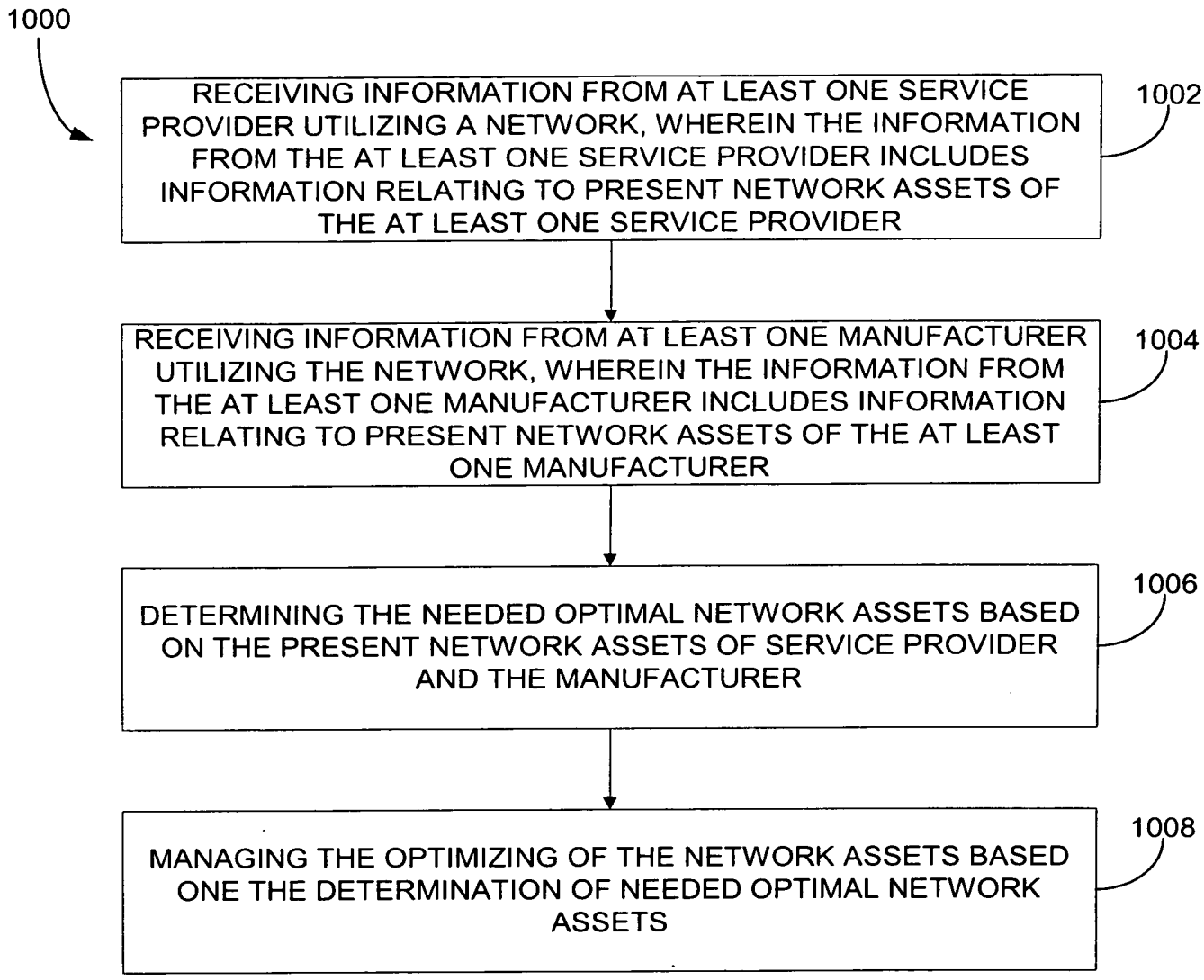

1000
RECEIVING INFORMATION FROM AT LEAST ONE SERVICE PROVIDER UTILIZING A NETWORK, WHEREIN THE INFORMATION FROM THE AT LEAST ONE SERVICE PROVIDER INCLUDES INFORMATION RELATING TO PRESENT NETWORK ASSETS OF THE AT LEAST ONE SERVICE PROVIDER
1002
RECEIVING INFORMATION FROM AT LEAST ONE MANUFACTURER UTILIZING THE NETWORK, WHEREIN THE INFORMATION FROM THE AT LEAST ONE MANUFACTURER INCLUDES INFORMATION RELATING TO PRESENT NETWORK ASSETS OF THE AT LEAST ONE MANUFACTURER
1004
DETERMINING THE NEEDED OPTIMAL NETWORK ASSETS BASED ON THE PRESENT NETWORK ASSETS OF SERVICE PROVIDER AND THE MANUFACTURER
1006
MANAGING THE OPTIMIZING OF THE NETWORK ASSETS BASED ONE THE DETERMINATION OF NEEDED OPTIMAL NETWORK ASSETS
1008

Figure 10

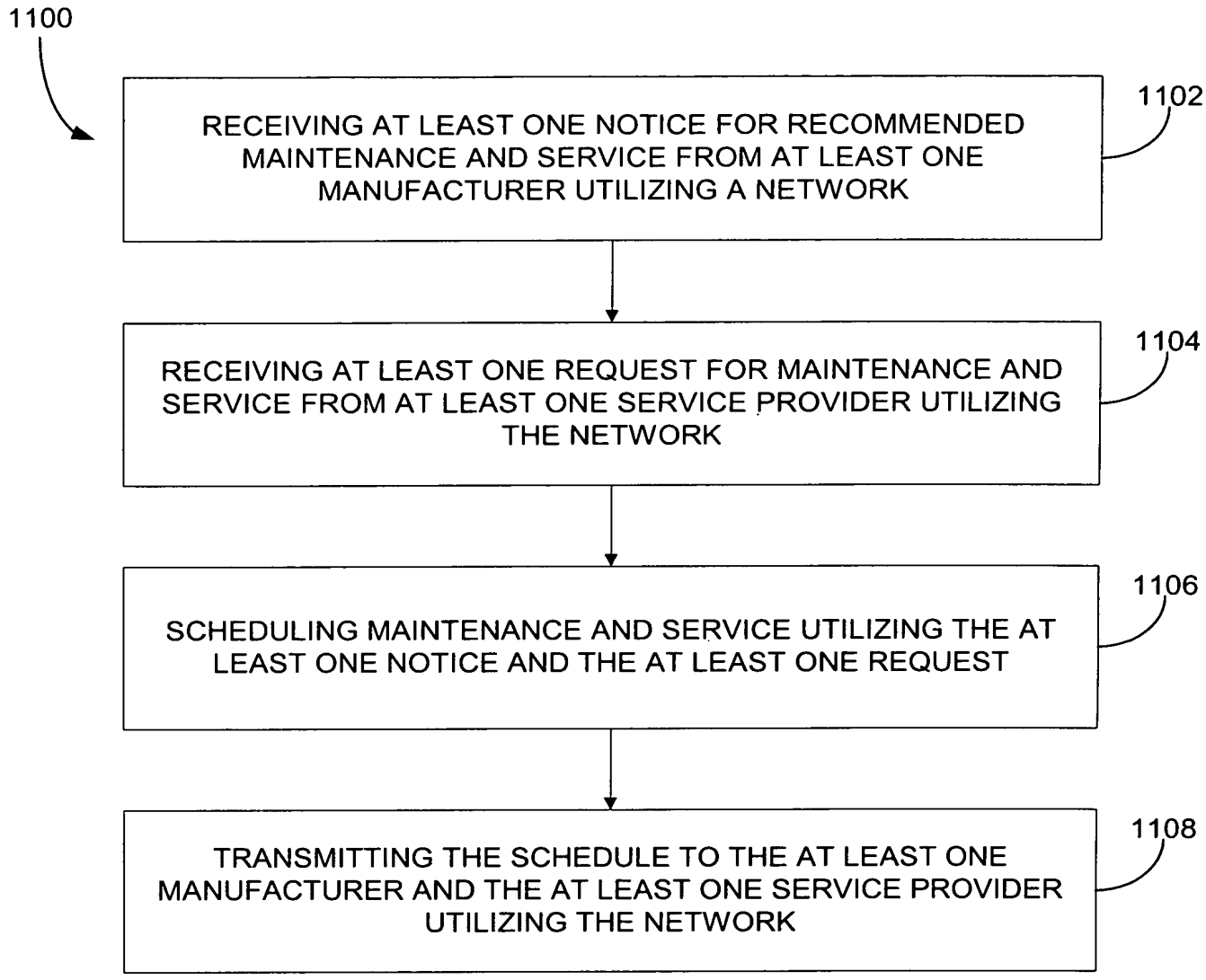

1100
RECEIVING AT LEAST ONE NOTICE FOR RECOMMENDED MAINTENANCE AND SERVICE FROM AT LEAST ONE MANUFACTURER UTILIZING A NETWORK
1102
RECEIVING AT LEAST ONE REQUEST FOR MAINTENANCE AND SERVICE FROM AT LEAST ONE SERVICE PROVIDER UTILIZING THE NETWORK
1104
SCHEDULING MAINTENANCE AND SERVICE UTILIZING THE AT LEAST ONE NOTICE AND THE AT LEAST ONE REQUEST
1106
TRANSMITTING THE SCHEDULE TO THE AT LEAST ONE MANUFACTURER AND THE AT LEAST ONE SERVICE PROVIDER UTILIZING THE NETWORK
1108

Figure 11

SUBSTITUTE SHEET (RULE 26)

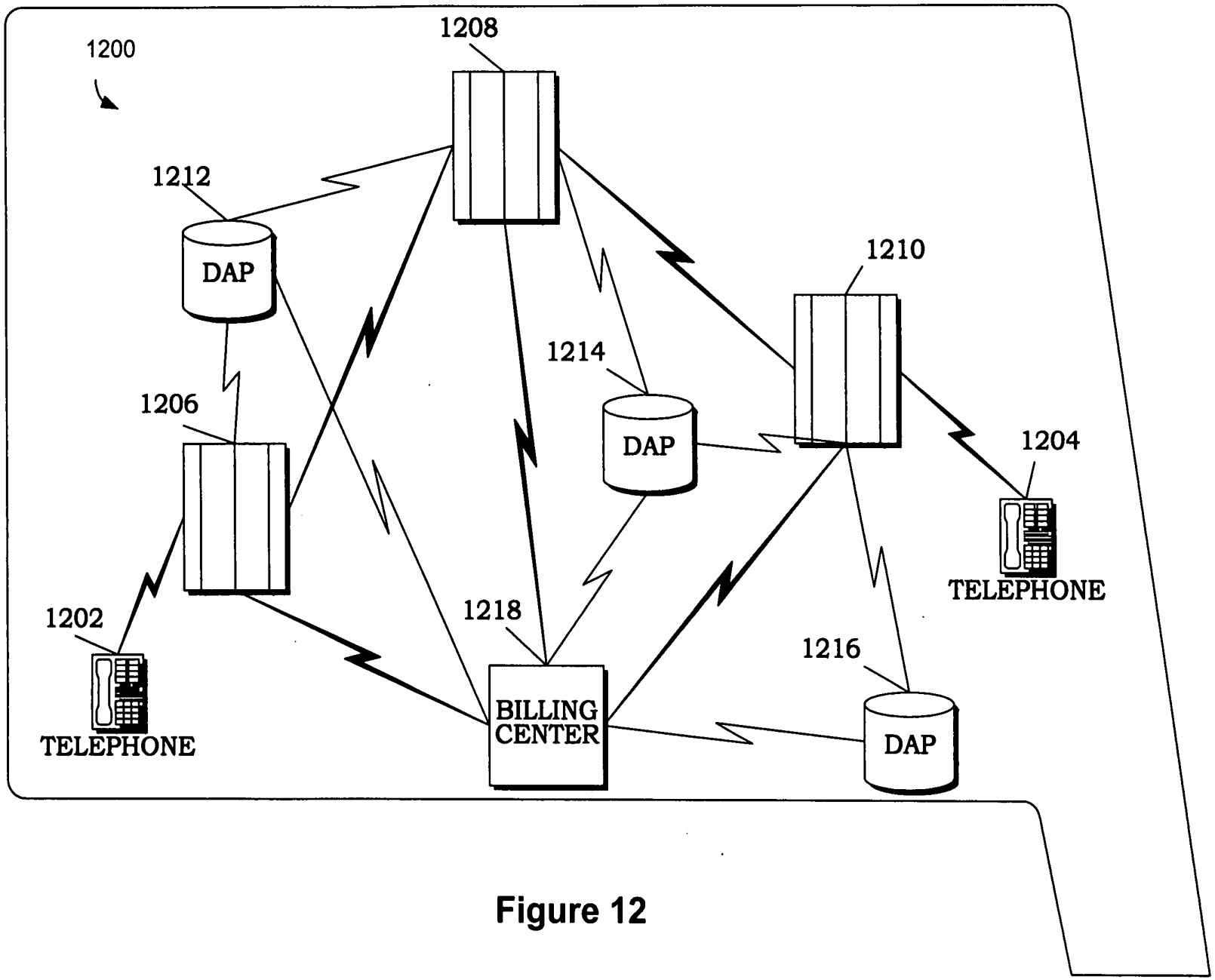


Figure 12

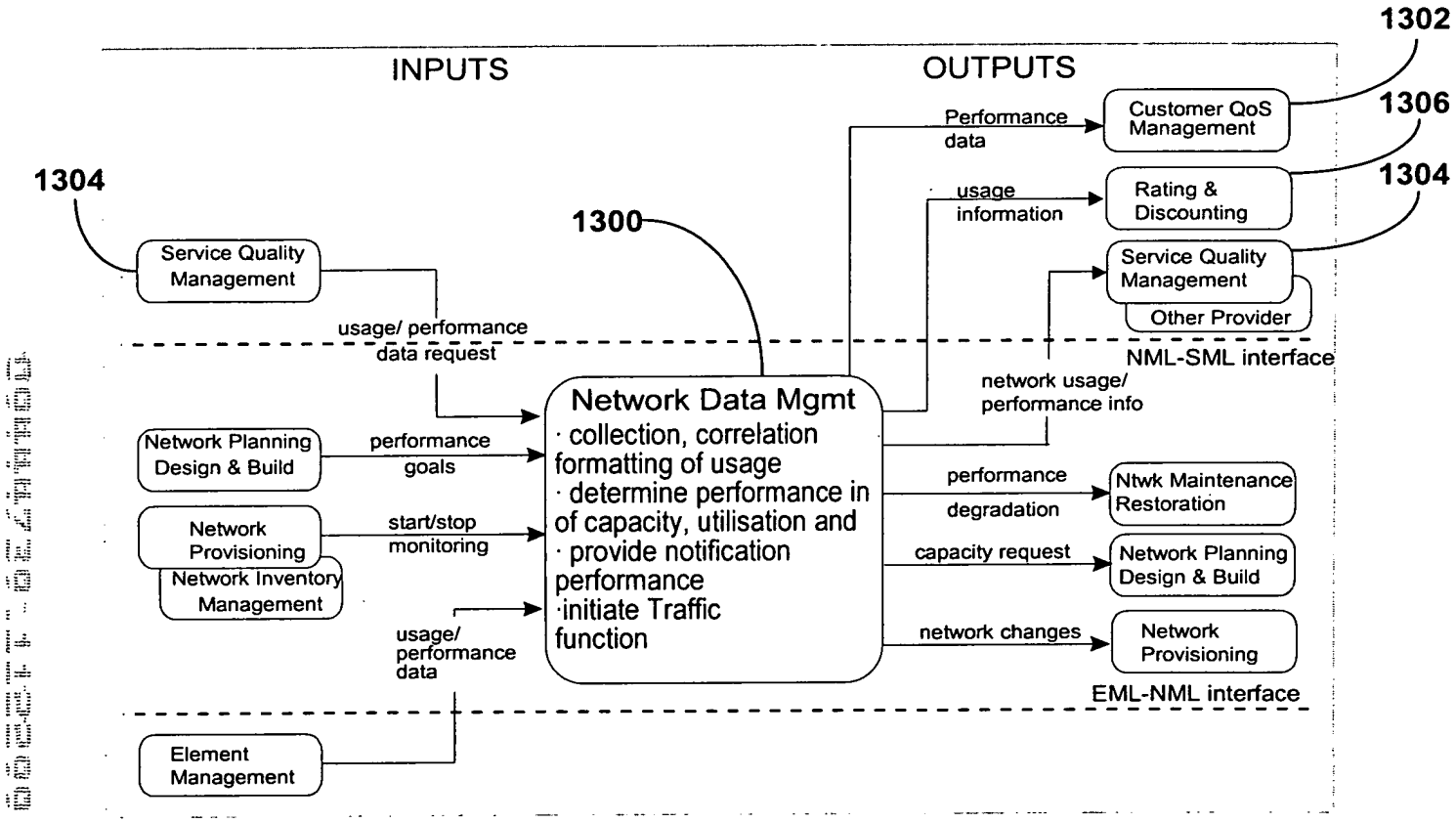

1302
INPUTS
OUTPUTS
1306
1304
1304
1300
Performance data
Customer QoS Management
usage information
Rating & Discounting
Service Quality Management
Service Quality Management
Other Provider
usage/ performance data request
NML-SML interface
network usage/ performance info
Network Data Mgmt
· collection, correlation formatting of usage
· determine performance in of capacity, utilisation and
· provide notification performance
·initiate Traffic function
Network Planning Design & Build
performance goals
performance degradation
Ntwk Maintenance Restoration
Network Provisioning
start/stop monitoring
capacity request
Network Planning Design & Build
Network Inventory Management
usage/ performance data
network changes
Network Provisioning
EML-NML interface
Element Management

Figure 13

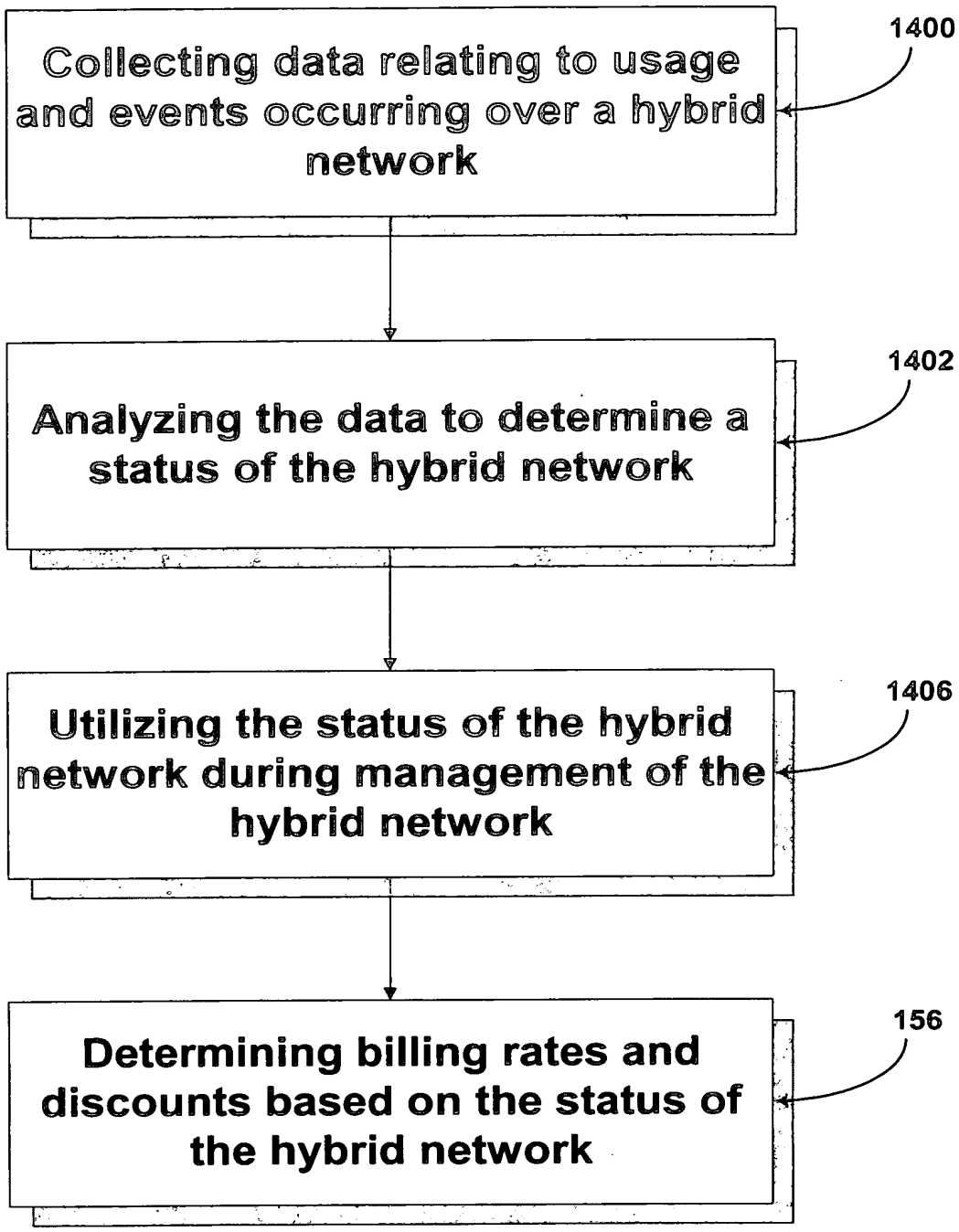

Collecting data relating to usage and events occurring over a hybrid network
1400
Analyzing the data to determine a status of the hybrid network
1402
Utilizing the status of the hybrid network during management of the hybrid network
1406
Determining billing rates and discounts based on the status of the hybrid network
156

Figure 14

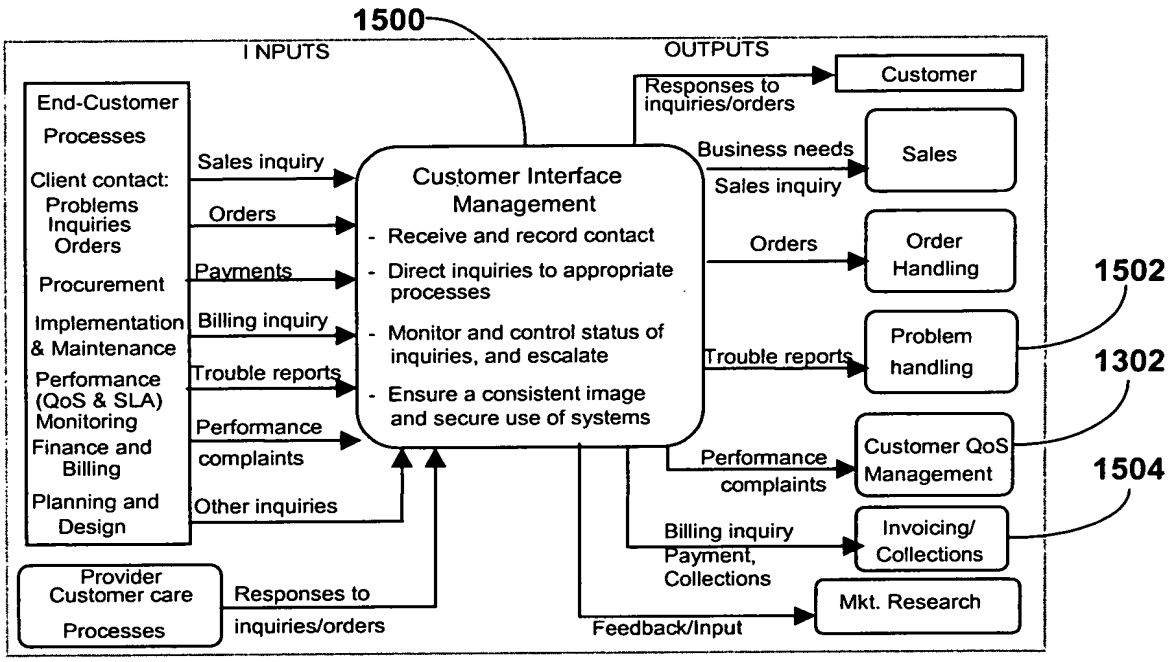

1500
INPUTS
OUTPUTS
End-Customer Processes
Client contact:
Problems
Inquiries
Orders
Procurement
Implementation & Maintenance
Performance (QoS & SLA) Monitoring
Finance and Billing
Planning and Design
Sales inquiry
Orders
Payments
Billing inquiry
Trouble reports
Performance complaints
Other inquiries
Customer Interface Management
- Receive and record contact
- Direct inquiries to appropriate processes
- Monitor and control status of inquiries, and escalate
- Ensure a consistent image and secure use of systems
Provider Customer care Processes
Responses to inquiries/orders
Responses to inquiries/orders
Customer
Business needs
Sales inquiry
Sales
Orders
Order Handling
Trouble reports
Problem handling
Performance complaints
Customer QoS Management
Billing inquiry
Payment, Collections
Invoicing/ Collections
Feedback/Input
Mkt. Research
1502
1302
1504

Figure 15

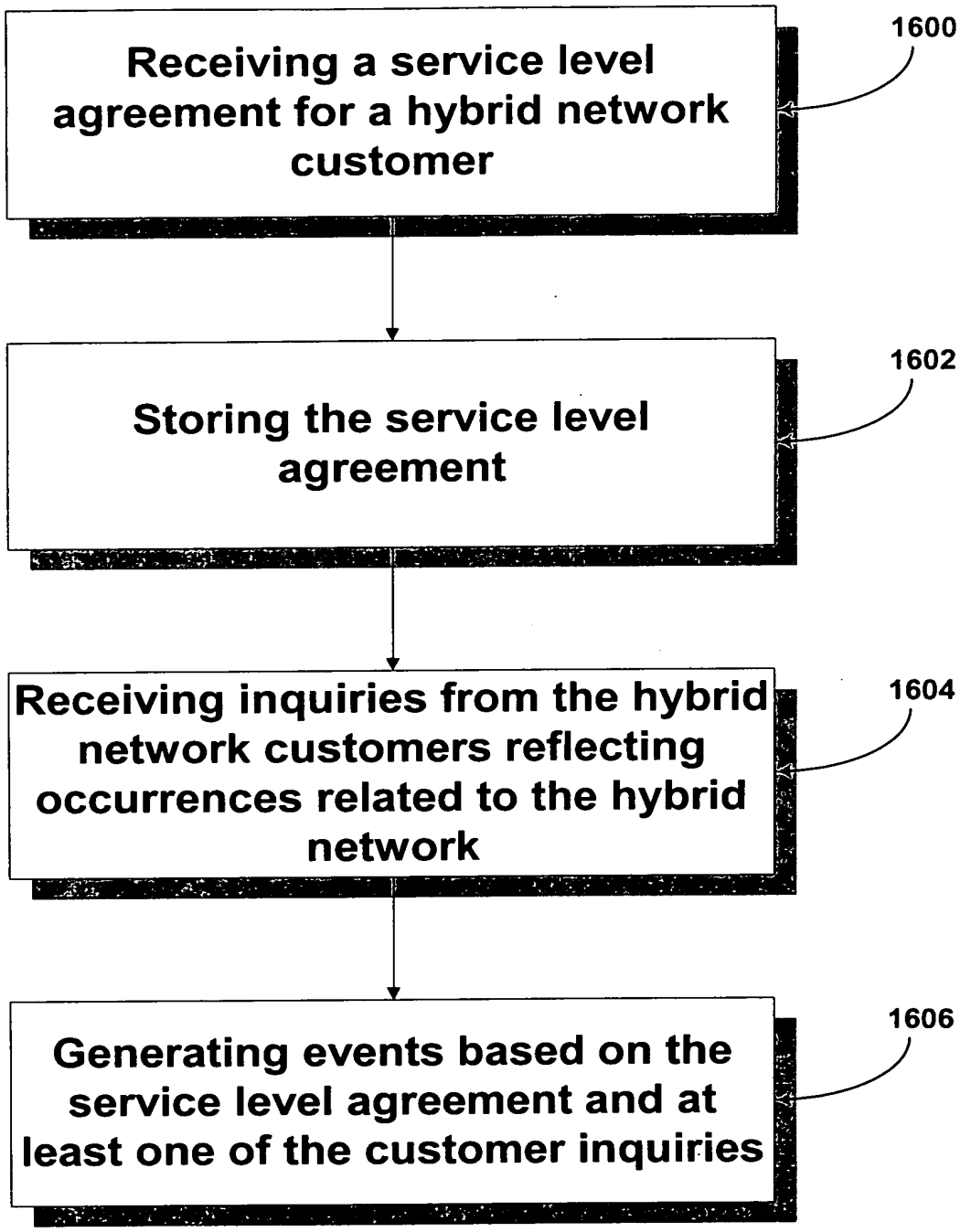

Receiving a service level agreement for a hybrid network customer
1600
Storing the service level agreement
1602
Receiving inquiries from the hybrid network customers reflecting occurrences related to the hybrid network
1604
Generating events based on the service level agreement and at least one of the customer inquiries
1606

Figure 16

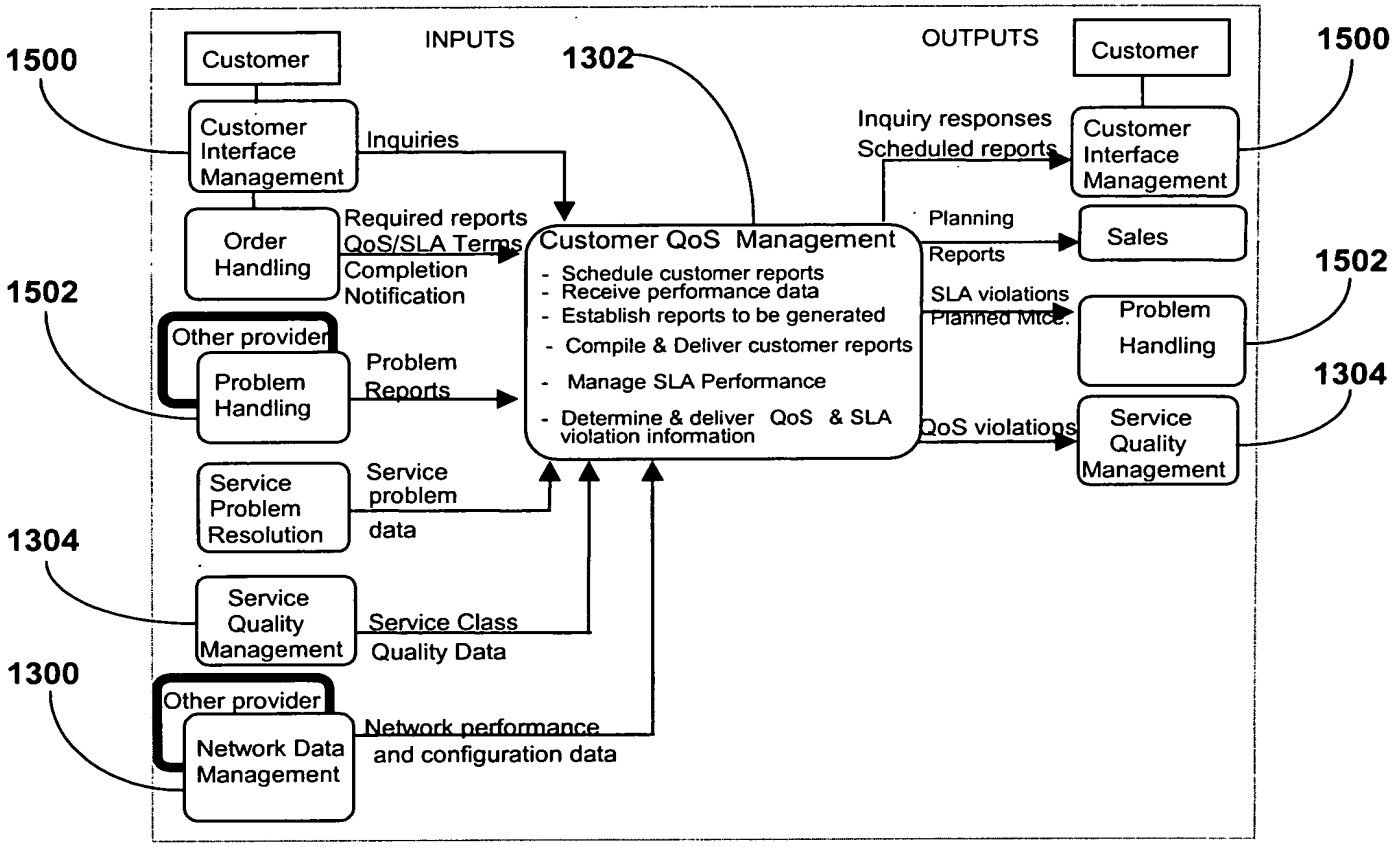

INPUTS
OUTPUTS
1500
1302
1500
Customer
Customer
Customer Interface Management
Inquiries
Inquiry responses
Scheduled reports
Customer Interface Management
Order Handling
Required reports
QoS/SLA Terms
Completion Notification
Customer QoS Management
- Schedule customer reports
- Receive performance data
- Establish reports to be generated
- Compile & Deliver customer reports
- Manage SLA Performance
- Determine & deliver QoS & SLA violation information
Planning
Reports
Sales
1502
1502
Other provider
Problem Handling
Problem Reports
SLA violations
Planned Mtce.
Problem Handling
1304
Service Problem Resolution
Service problem data
QoS violations
Service Quality Management
1304
Service Quality Management
Service Class Quality Data
1300
Other provider
Network Data Management
Network performance and configuration data

Figure 17

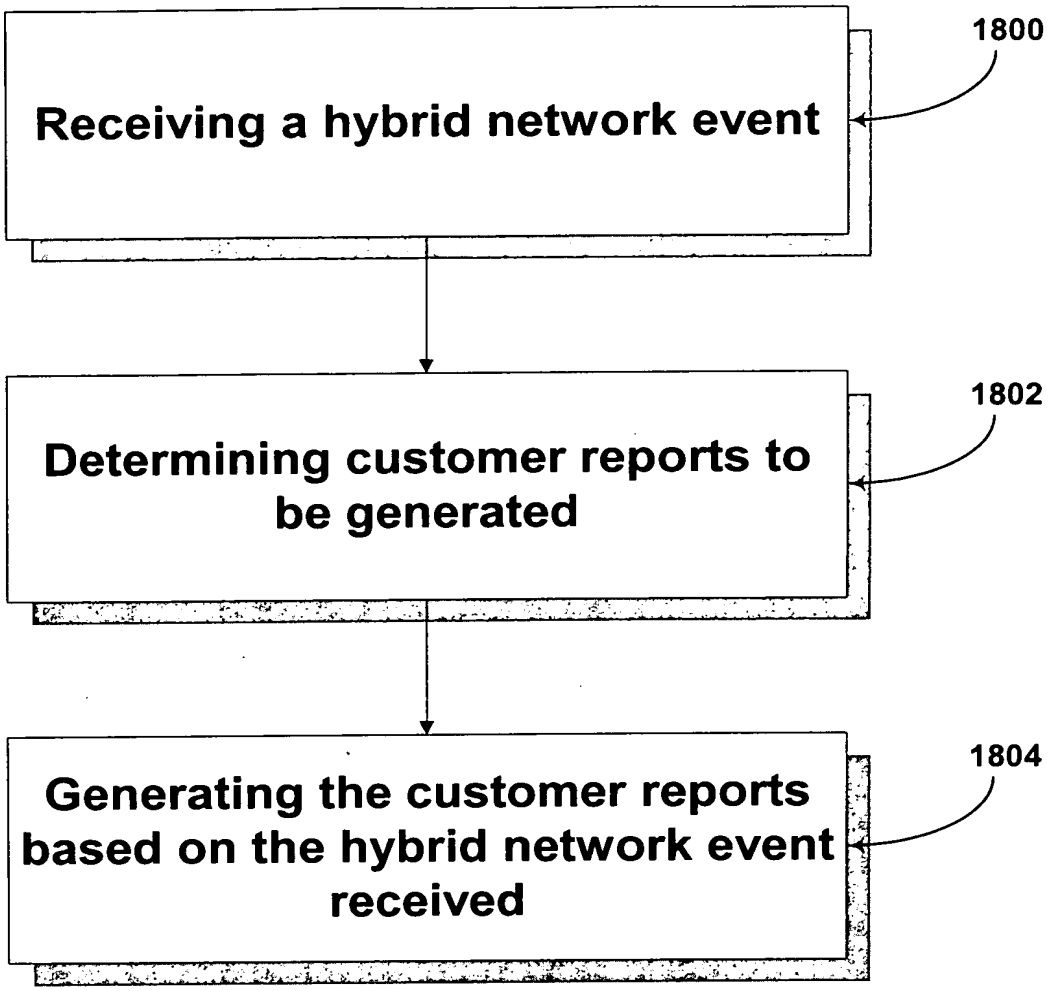

Receiving a hybrid network event
1800
Determining customer reports to be generated
1802
Generating the customer reports based on the hybrid network event received
1804

Figure 18

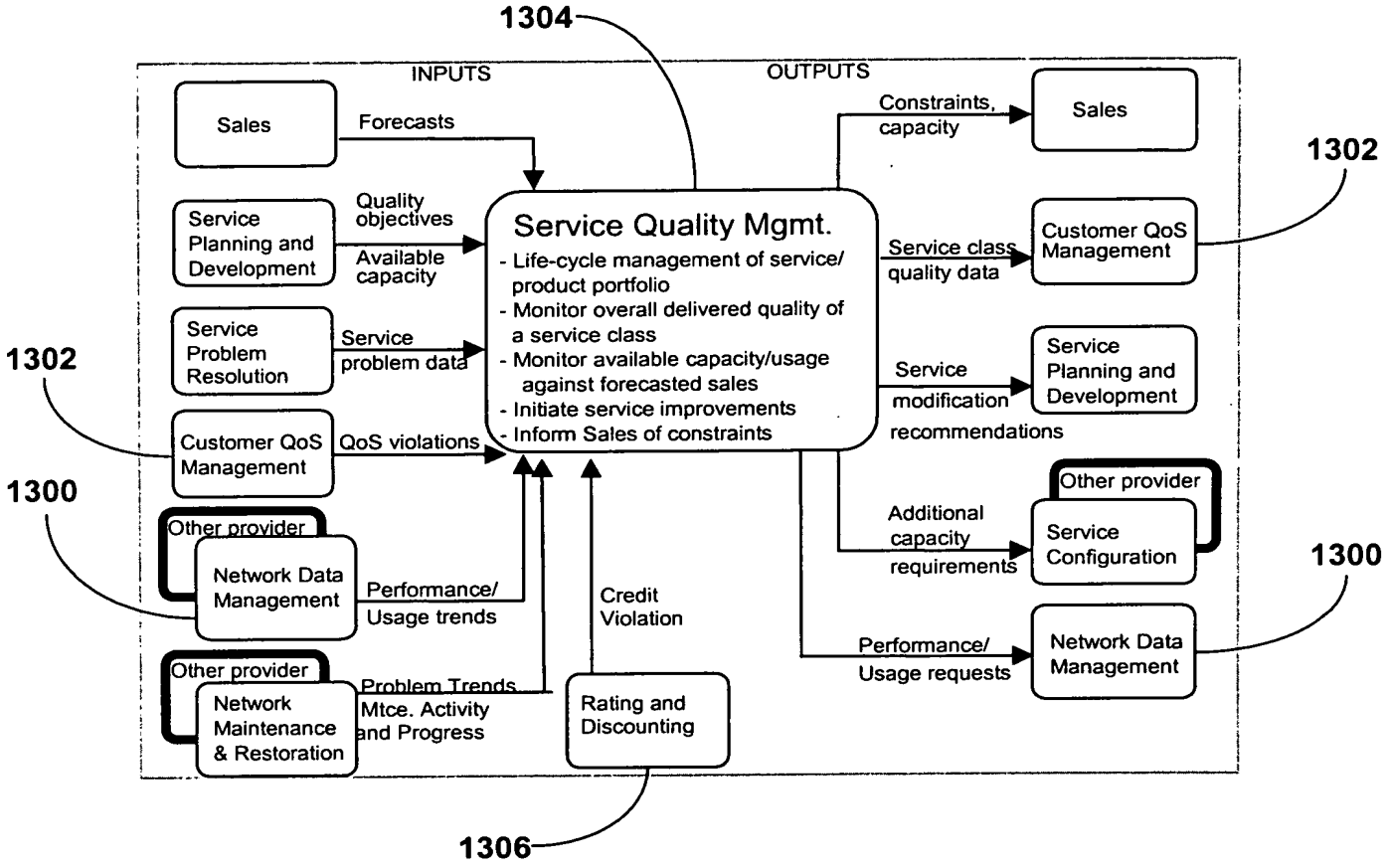

1304
INPUTS
OUTPUTS
Sales
Forecasts
Constraints, capacity
Sales
1302
Service Planning and Development
Quality objectives
Available capacity
Service Quality Mgmt.
- Life-cycle management of service/ product portfolio
- Monitor overall delivered quality of a service class
- Monitor available capacity/usage against forecasted sales
- Initiate service improvements
- Inform Sales of constraints
Service class quality data
Customer QoS Management
Service Problem Resolution
Service problem data
Service modification recommendations
Service Planning and Development
1302
Customer QoS Management
QoS violations
1300
Other provider
Network Data Management
Performance/ Usage trends
Credit Violation
Additional capacity requirements
Other provider
Service Configuration
1300
Performance/ Usage requests
Network Data Management
Other provider
Network Maintenance & Restoration
Problem Trends, Mtce. Activity and Progress
Rating and Discounting
1306

Figure 19

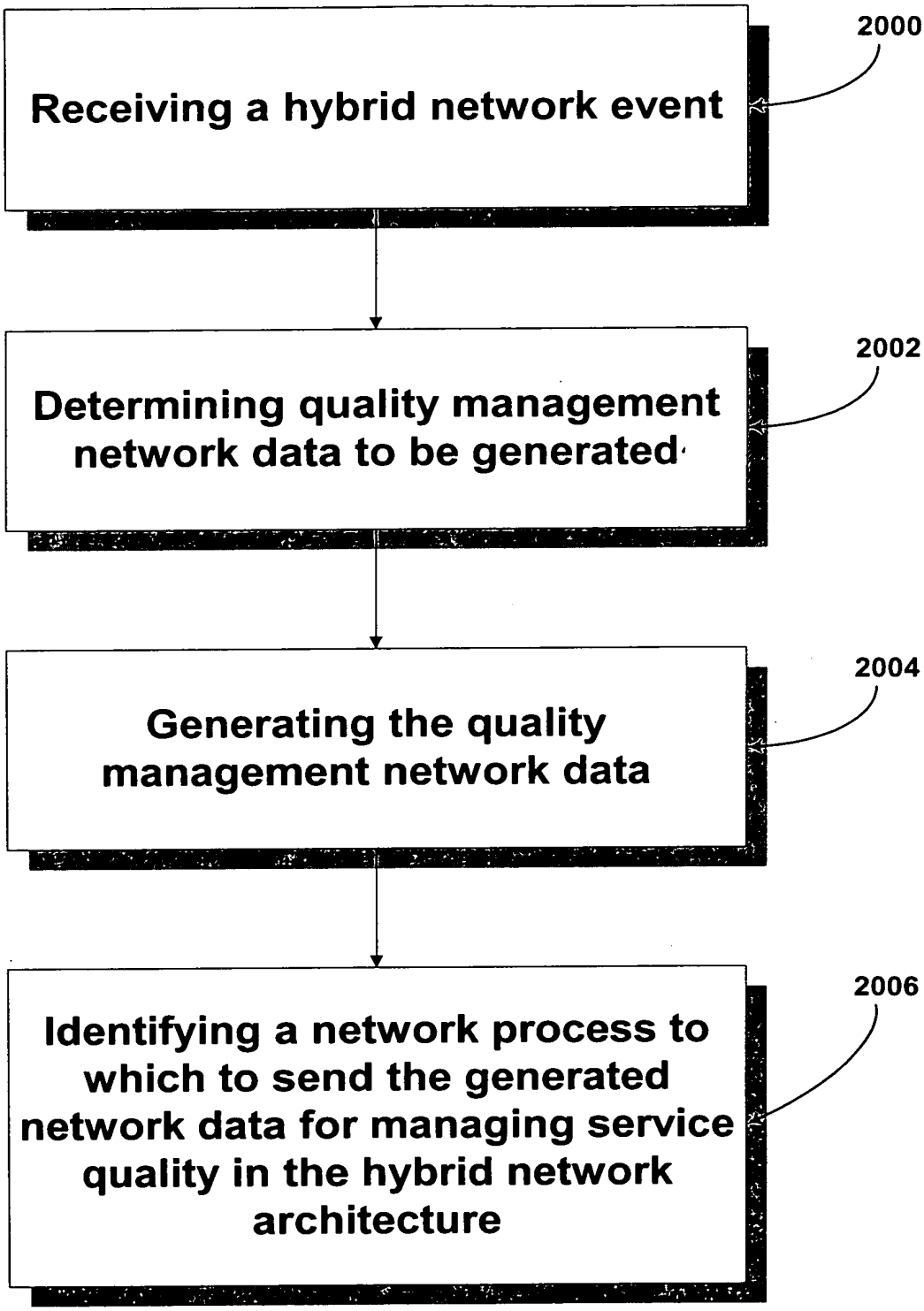

Receiving a hybrid network event
2000
Determining quality management network data to be generated
2002
Generating the quality management network data
2004
Identifying a network process to which to send the generated network data for managing service quality in the hybrid network architecture
2006

Figure 20

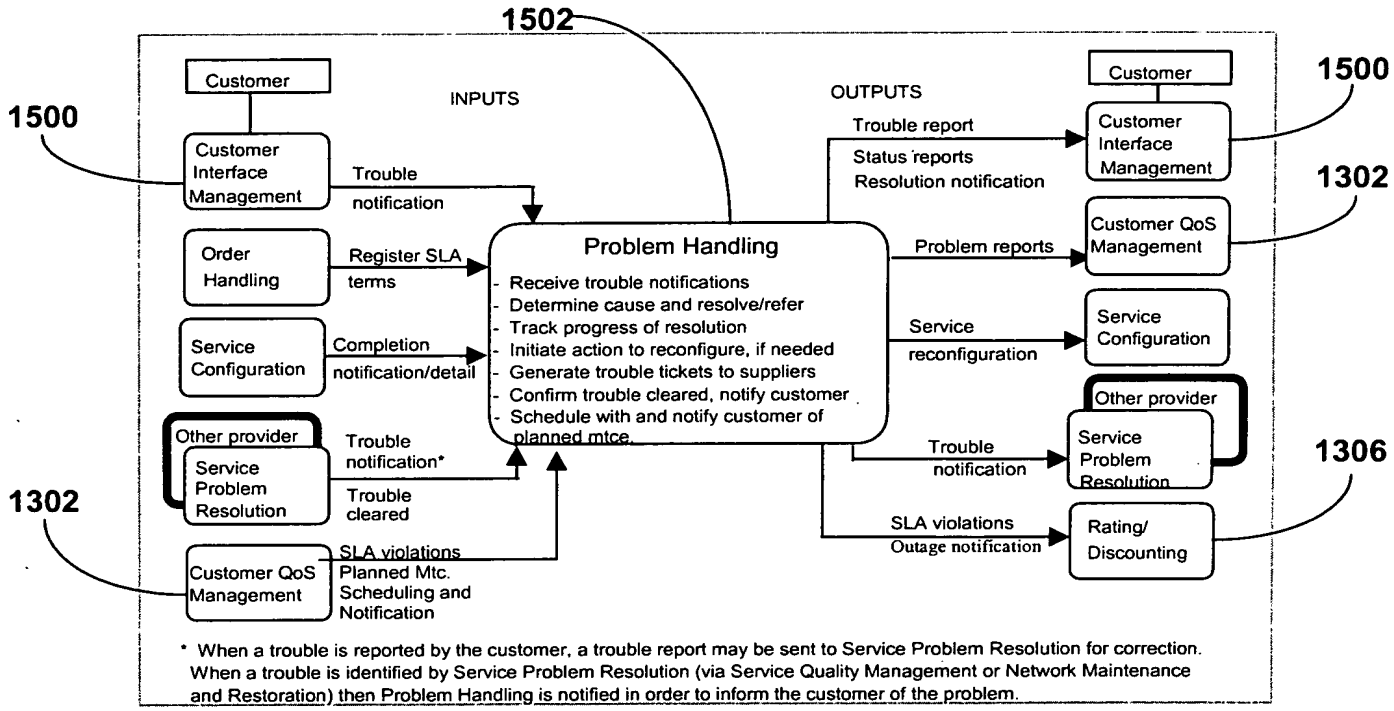

1502
Customer
INPUTS
OUTPUTS
Customer
1500
1500
Customer Interface Management
Trouble notification
Trouble report
Status reports
Resolution notification
Customer Interface Management
1302
Order Handling
Register SLA terms
Problem Handling
- Receive trouble notifications
- Determine cause and resolve/refer
- Track progress of resolution
- Initiate action to reconfigure, if needed
- Generate trouble tickets to suppliers
- Confirm trouble cleared, notify customer
- Schedule with and notify customer of planned mtce.
Problem reports
Customer QoS Management
Service Configuration
Completion notification/detail
Service reconfiguration
Service Configuration
Other provider
Other provider
Service Problem Resolution
Trouble notification*
Trouble cleared
Trouble notification
Service Problem Resolution
1306
1302
SLA violations
Outage notification
Rating/ Discounting
Customer QoS Management
SLA violations
Planned Mtc. Scheduling and Notification
* When a trouble is reported by the customer, a trouble report may be sent to Service Problem Resolution for correction. When a trouble is identified by Service Problem Resolution (via Service Quality Management or Network Maintenance and Restoration) then Problem Handling is notified in order to inform the customer of the problem.

Figure 21

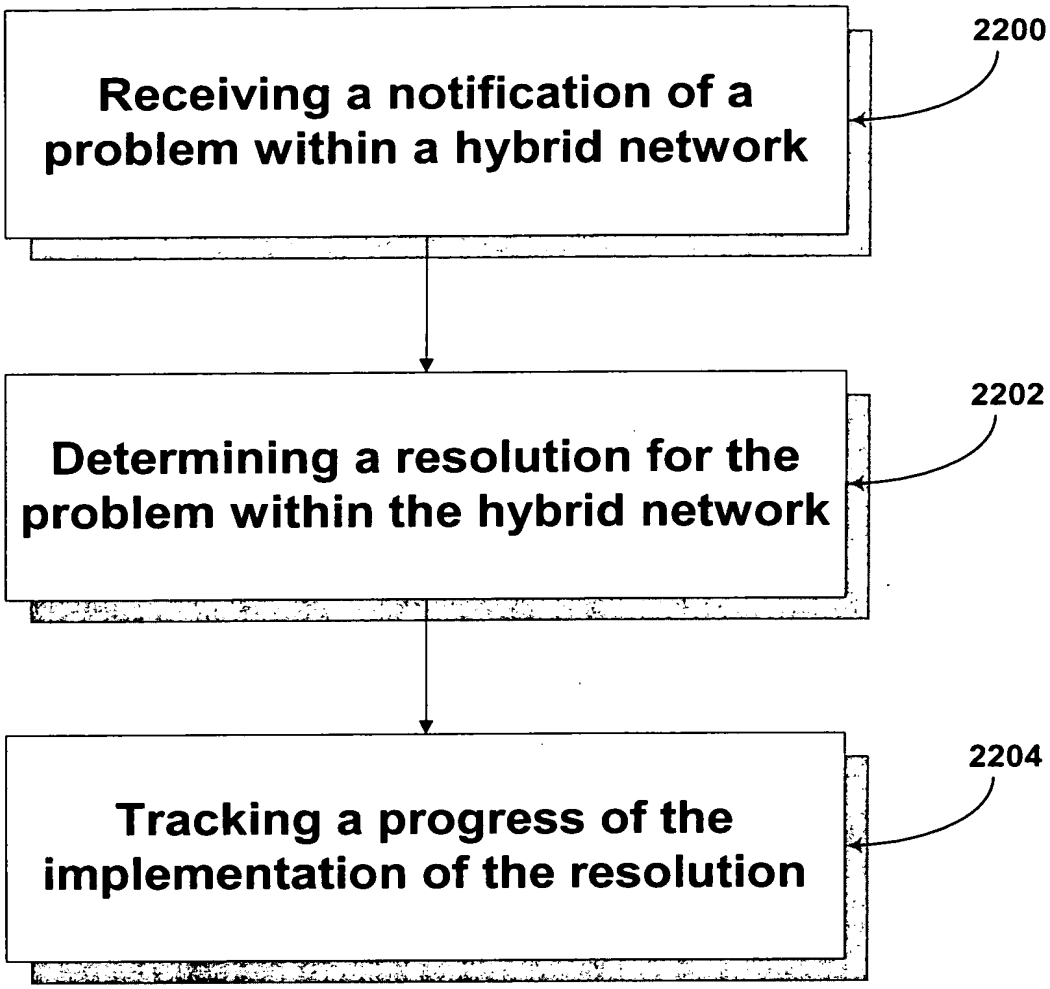

Receiving a notification of a problem within a hybrid network
2200
Determining a resolution for the problem within the hybrid network
2202
Tracking a progress of the implementation of the resolution
2204

Figure 22

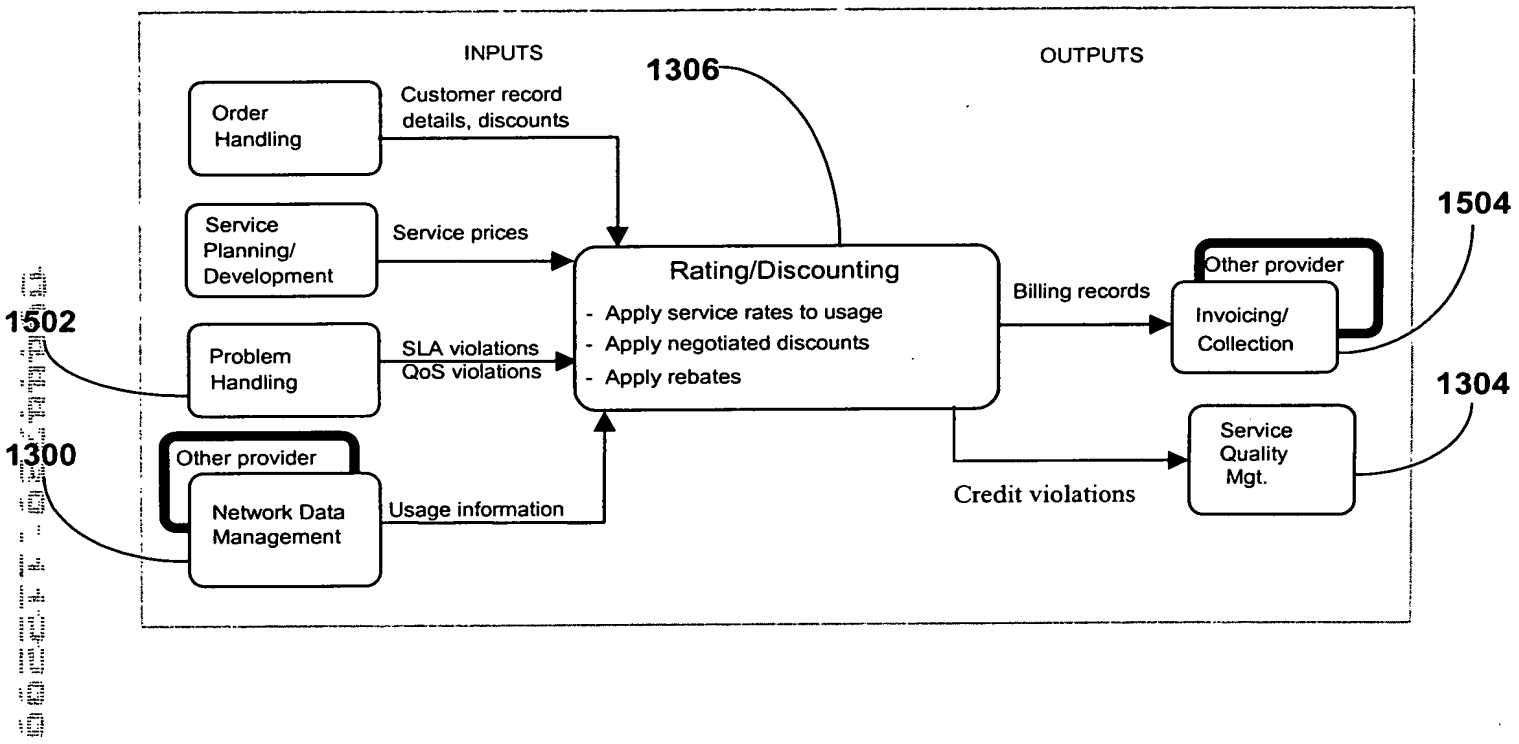

INPUTS
OUTPUTS
1306
Order Handling
Customer record details, discounts
Service Planning/ Development
Service prices
Problem Handling
SLA violations
QoS violations
Other provider
Network Data Management
Usage information
Rating/Discounting
- Apply service rates to usage
- Apply negotiated discounts
- Apply rebates
Billing records
Other provider
Invoicing/ Collection
Credit violations
Service Quality Mgt.
1502
1300
1504
1304

Figure 23

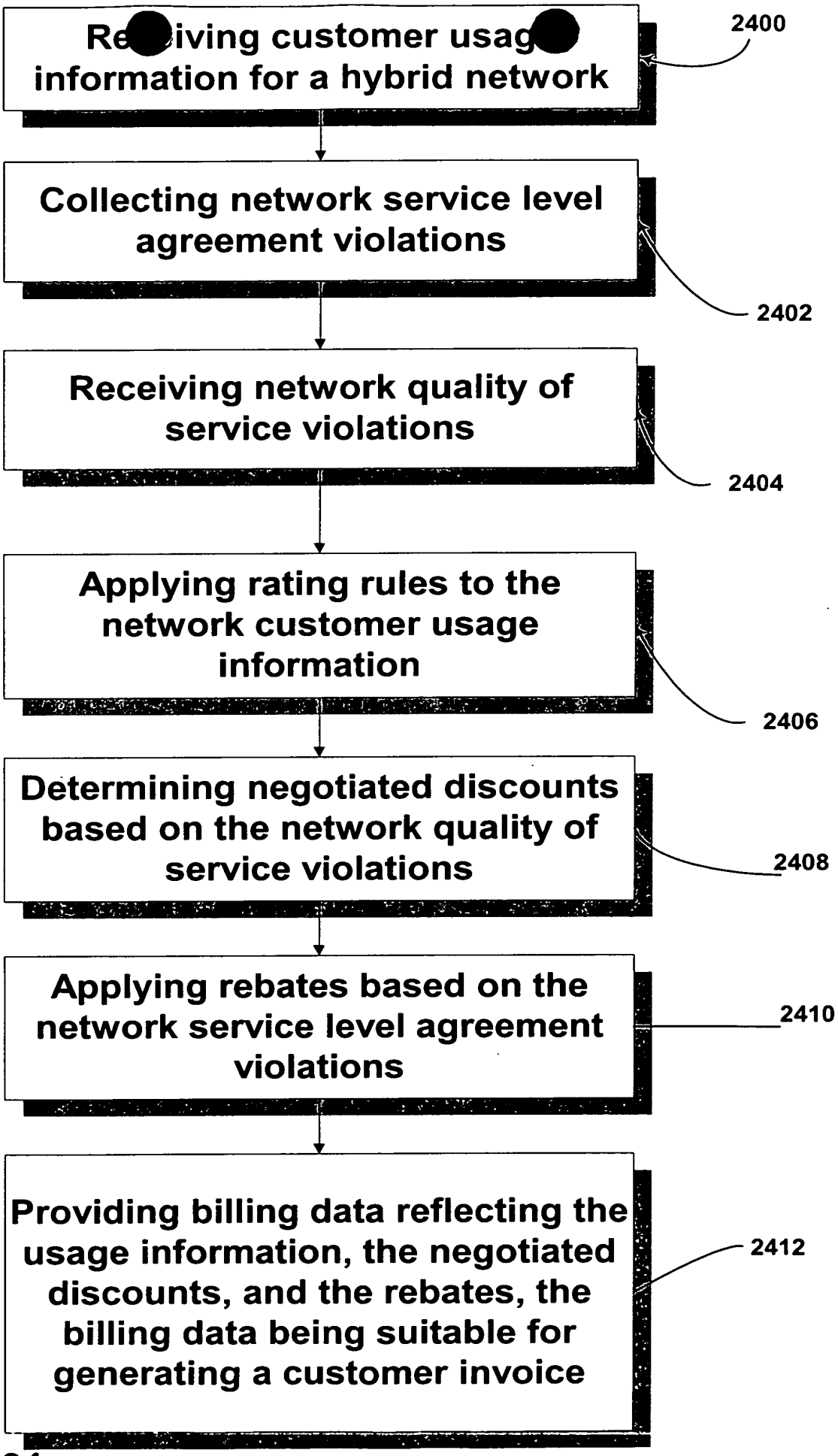

Receiving customer usage information for a hybrid network
2400
Collecting network service level agreement violations
2402
Receiving network quality of service violations
2404
Applying rating rules to the network customer usage information
2406
Determining negotiated discounts based on the network quality of service violations
2408
Applying rebates based on the network service level agreement violations
2410
Providing billing data reflecting the usage information, the negotiated discounts, and the rebates, the billing data being suitable for generating a customer invoice
2412

Figure 24

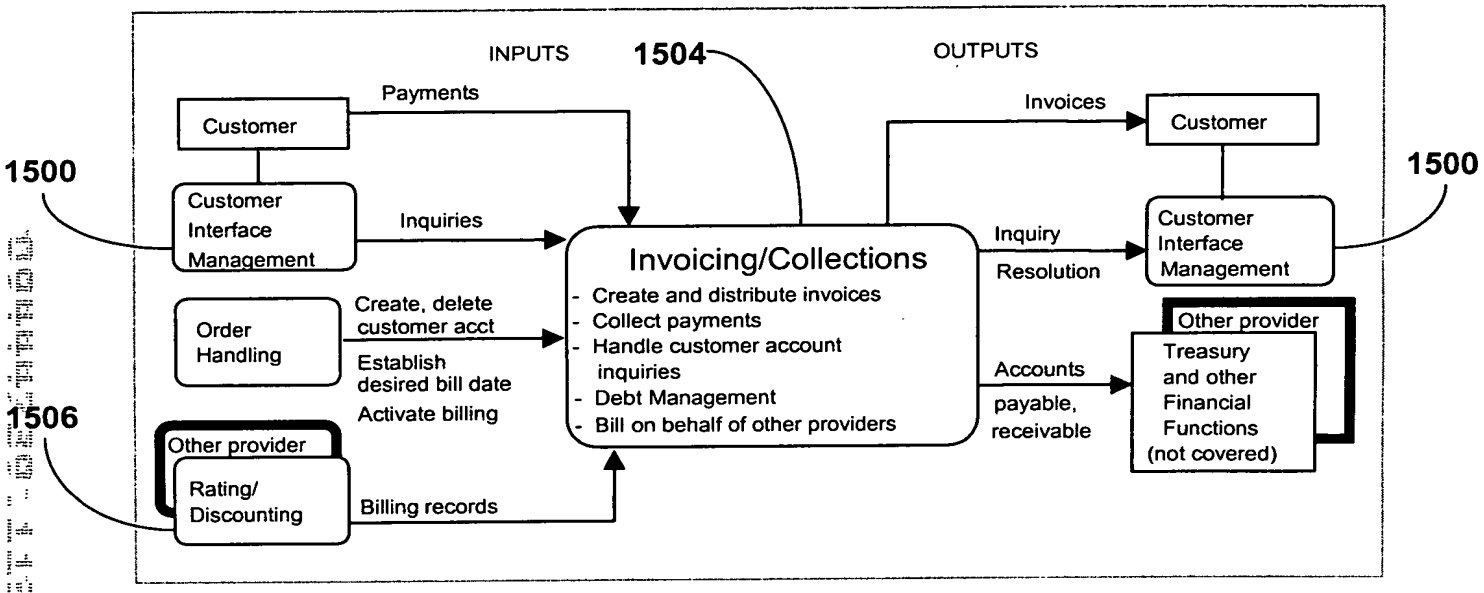

INPUTS
1504
OUTPUTS
Payments
Customer
Invoices
Customer
1500
1500
Customer Interface Management
Inquiries
Invoicing/Collections
- Create and distribute invoices
- Collect payments
- Handle customer account inquiries
- Debt Management
- Bill on behalf of other providers
Inquiry
Resolution
Customer Interface Management
Order Handling
Create, delete customer acct
Establish desired bill date
Activate billing
Other provider
Treasury and other Financial Functions (not covered)
Accounts payable, receivable
1506
Other provider
Rating/ Discounting
Billing records

Figure 25

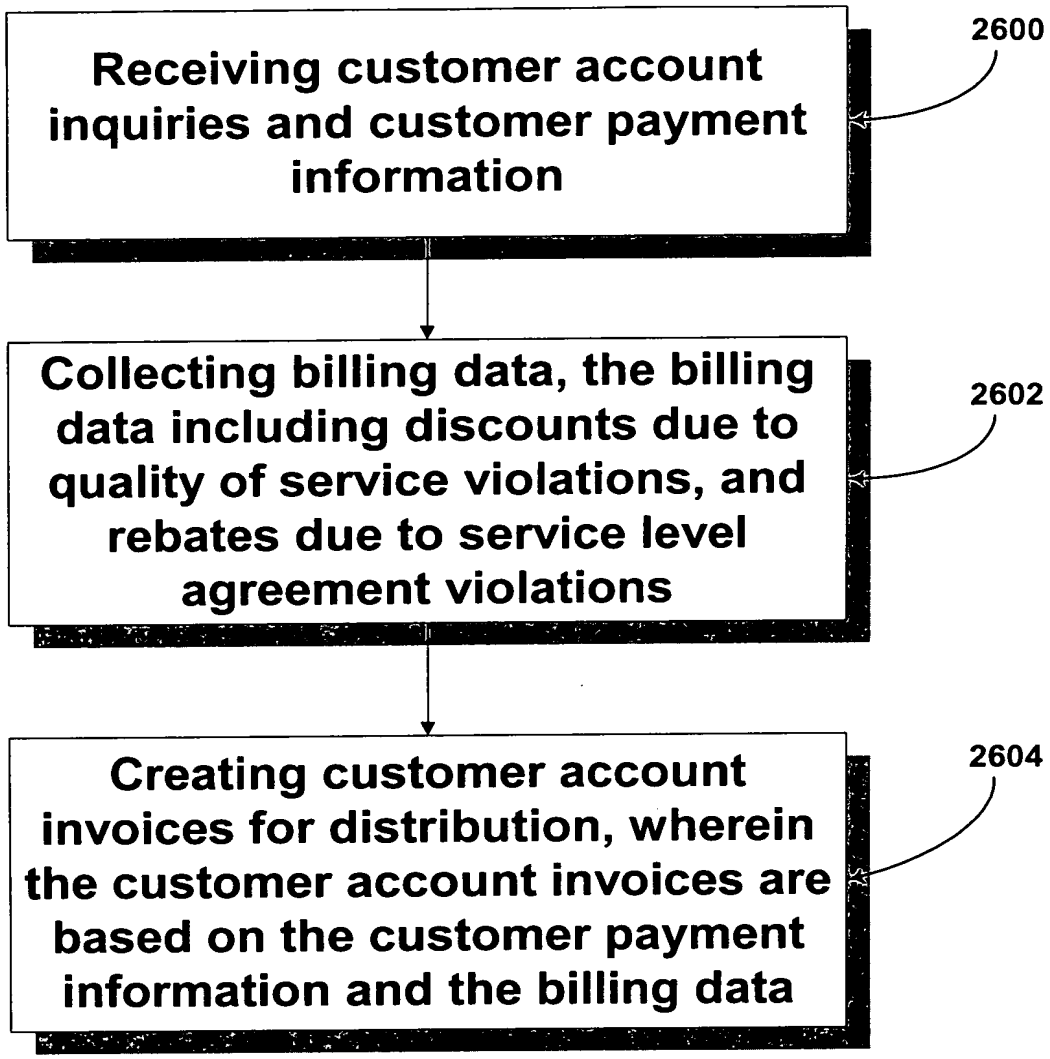

Receiving customer account inquiries and customer payment information
2600
Collecting billing data, the billing data including discounts due to quality of service violations, and rebates due to service level agreement violations
2602
Creating customer account invoices for distribution, wherein the customer account invoices are based on the customer payment information and the billing data
2604

Figure 26

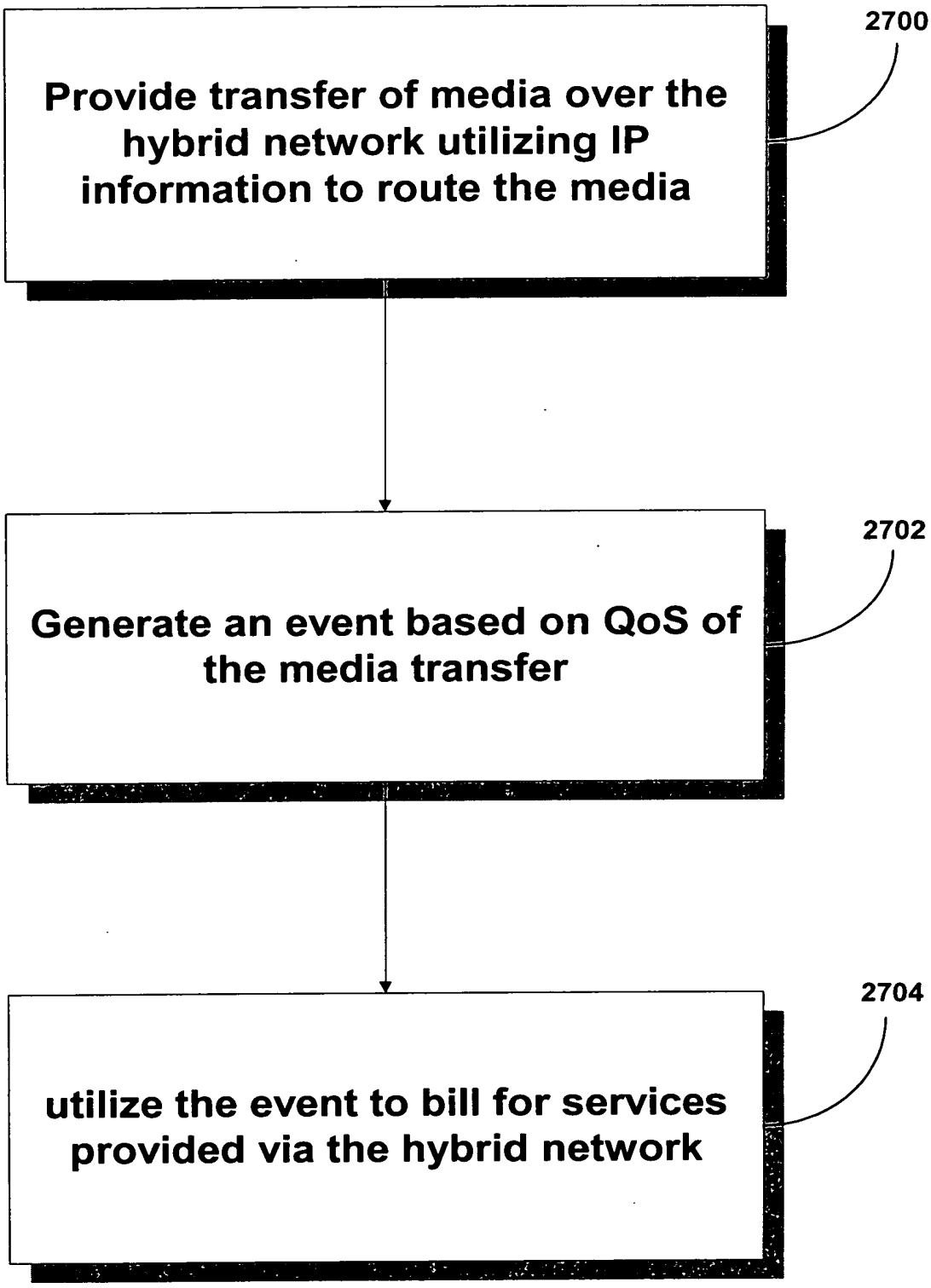

Provide transfer of media over the hybrid network utilizing IP information to route the media
2700
Generate an event based on QoS of the media transfer
2702
utilize the event to bill for services provided via the hybrid network
2704

Figure 27

SECRET-DECLASSIFIED

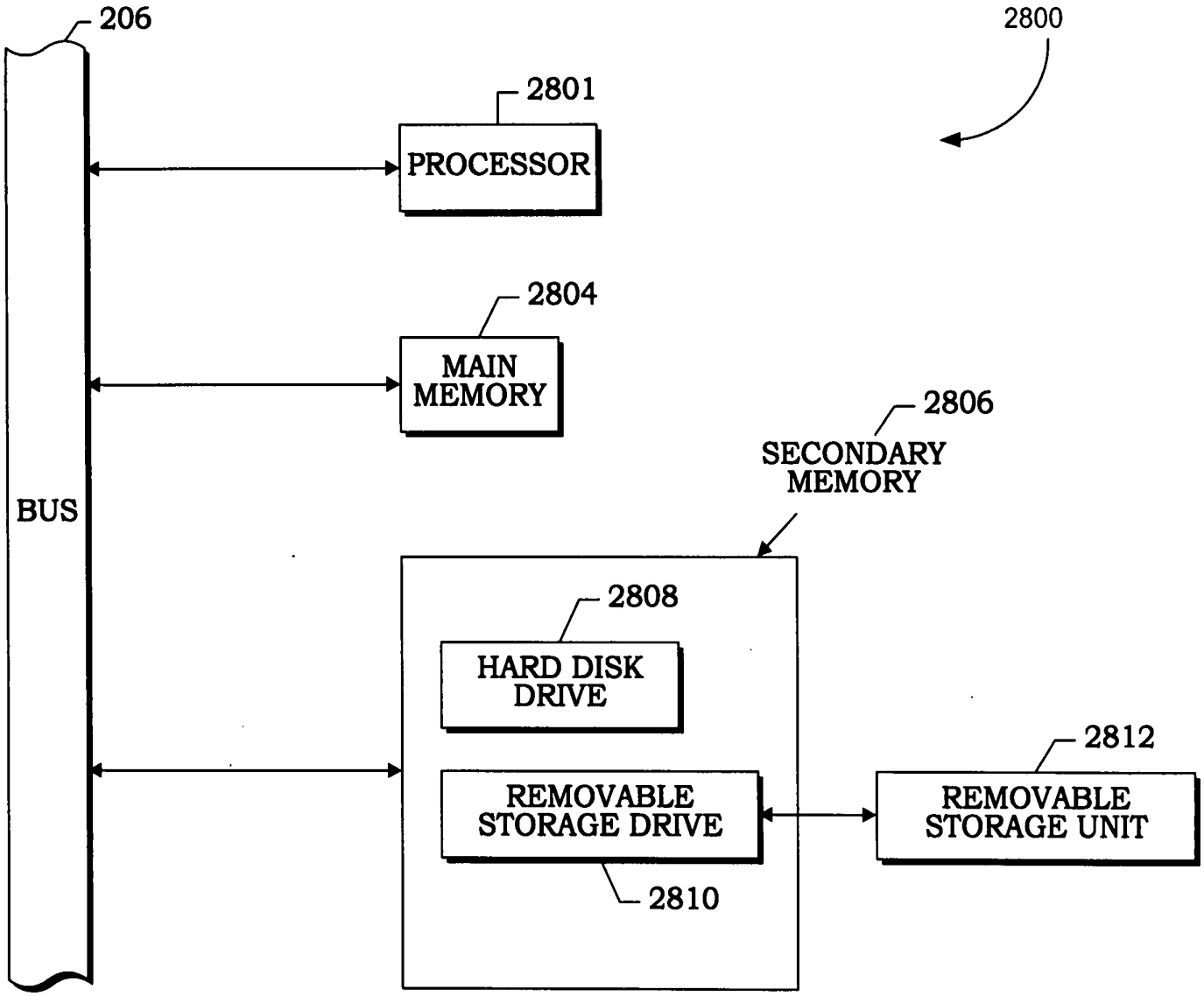


Figure 28

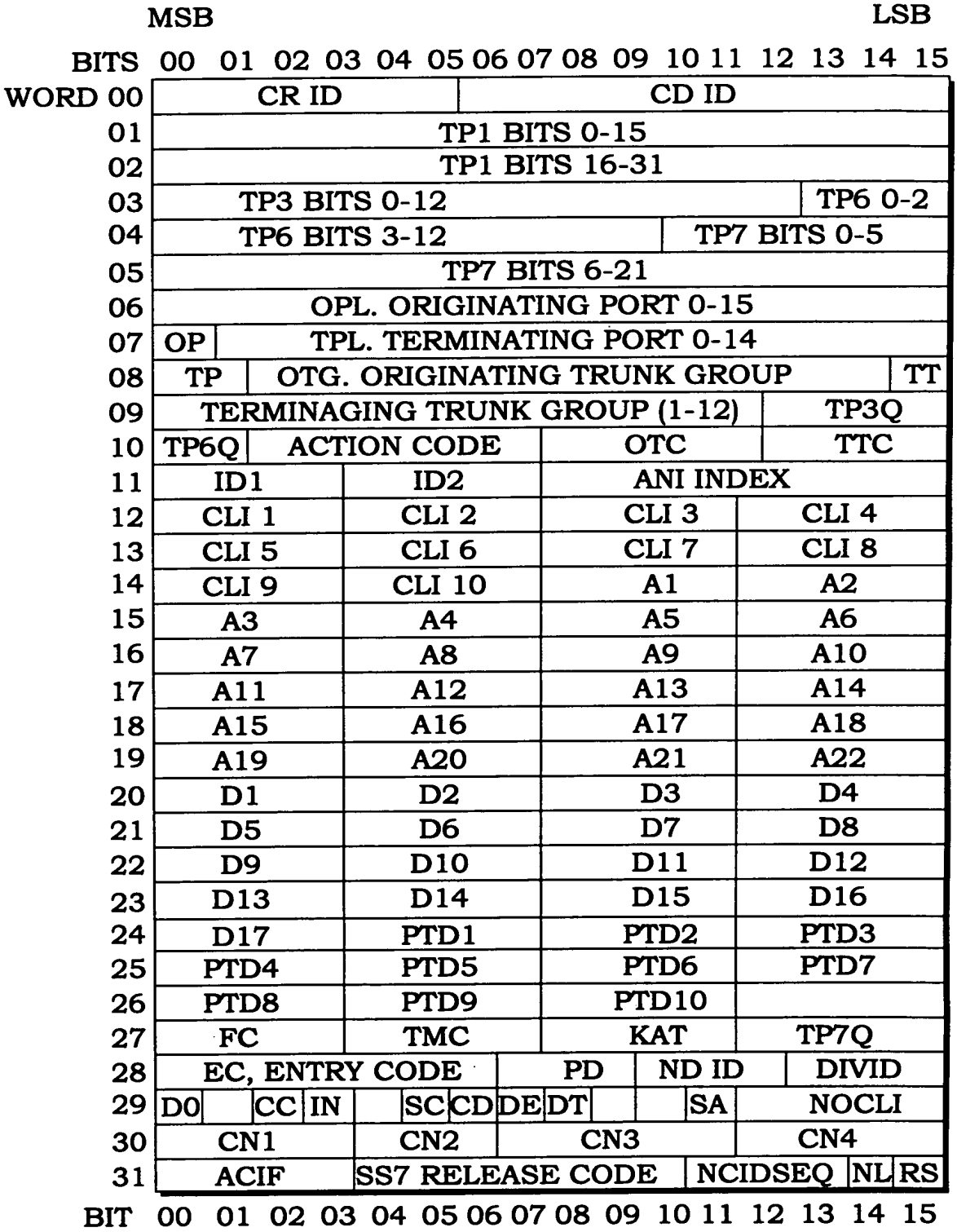

MSB
LSB
BITS 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
WORD 00
CR ID
CD ID
01
TP1 BITS 0-15
02
TP1 BITS 16-31
03
TP3 BITS 0-12
TP6 0-2
04
TP6 BITS 3-12
TP7 BITS 0-5
05
TP7 BITS 6-21
06
OPL. ORIGINATING PORT 0-15
07
OP
TPL. TERMINATING PORT 0-14
08
TP
OTG. ORIGINATING TRUNK GROUP
TT
09
TERMINAGING TRUNK GROUP (1-12)
TP3Q
10
TP6Q
ACTION CODE
OTC
TTC
11
ID1
ID2
ANI INDEX
12
CLI 1
CLI 2
CLI 3
CLI 4
13
CLI 5
CLI 6
CLI 7
CLI 8
14
CLI 9
CLI 10
A1
A2
15
A3
A4
A5
A6
16
A7
A8
A9
A10
17
A11
A12
A13
A14
18
A15
A16
A17
A18
19
A19
A20
A21
A22
20
D1
D2
D3
D4
21
D5
D6
D7
D8
22
D9
D10
D11
D12
23
D13
D14
D15
D16
24
D17
PTD1
PTD2
PTD3
25
PTD4
PTD5
PTD6
PTD7
26
PTD8
PTD9
PTD10
27
FC
TMC
KAT
TP7Q
28
EC, ENTRY CODE
PD
ND ID
DIVID
29
D0
CC
IN
SC
CD
DE
DT
SA
NOCLI
30
CN1
CN2
CN3
CN4
31
ACIF
SS7 RELEASE CODE
NCIDSEQ
NL
RS
BIT 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15

Figure 29

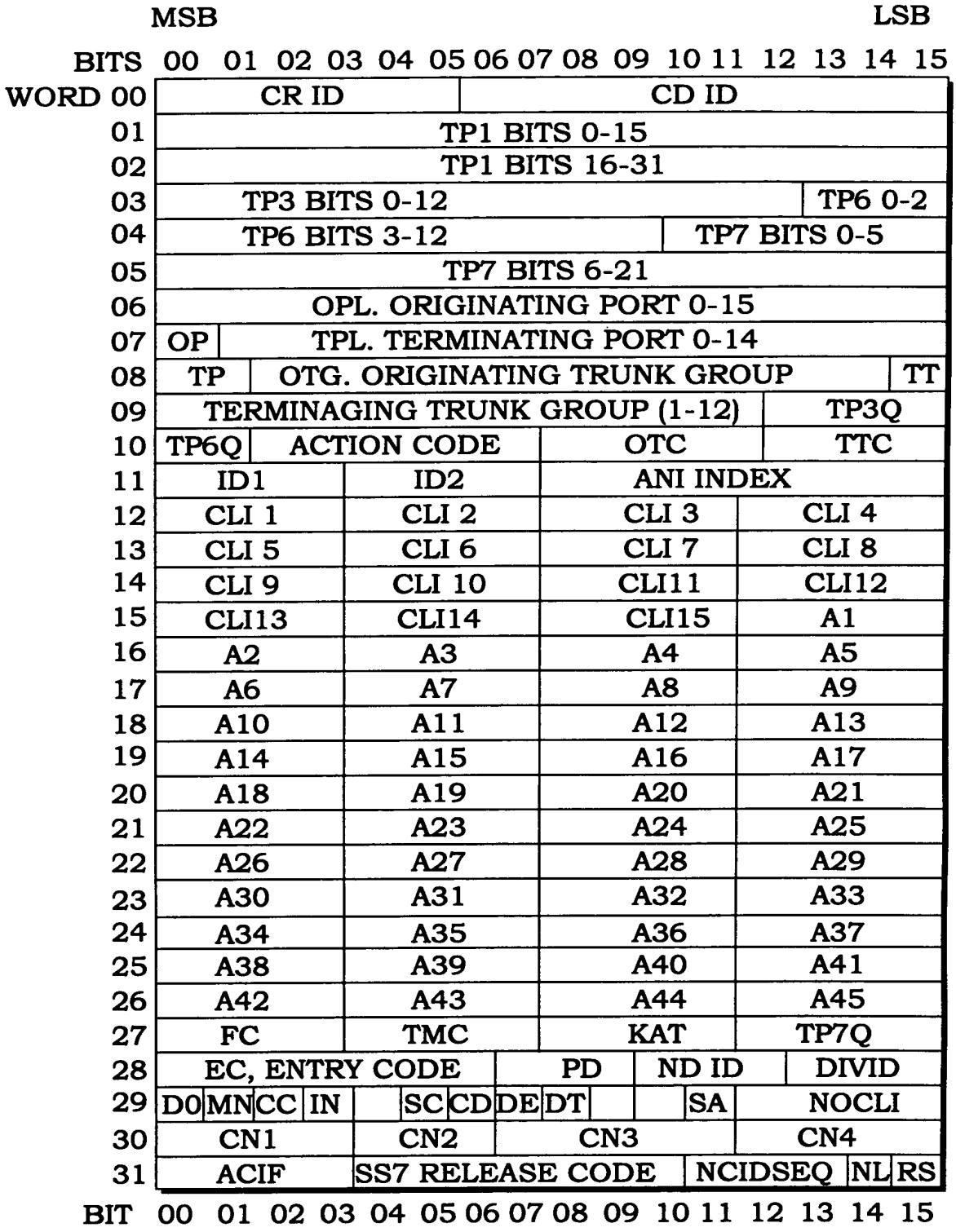

MSB
LSB
BITS 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
WORD 00
CR ID
CD ID
01
TP1 BITS 0-15
02
TP1 BITS 16-31
03
TP3 BITS 0-12
TP6 0-2
04
TP6 BITS 3-12
TP7 BITS 0-5
05
TP7 BITS 6-21
06
OPL. ORIGINATING PORT 0-15
07
OP
TPL. TERMINATING PORT 0-14
08
TP
OTG. ORIGINATING TRUNK GROUP
TT
09
TERMINAGING TRUNK GROUP (1-12)
TP3Q
10
TP6Q
ACTION CODE
OTC
TTC
11
ID1
ID2
ANI INDEX
12
CLI 1
CLI 2
CLI 3
CLI 4
13
CLI 5
CLI 6
CLI 7
CLI 8
14
CLI 9
CLI 10
CLI11
CLI12
15
CLI13
CLI14
CLI15
A1
16
A2
A3
A4
A5
17
A6
A7
A8
A9
18
A10
A11
A12
A13
19
A14
A15
A16
A17
20
A18
A19
A20
A21
21
A22
A23
A24
A25
22
A26
A27
A28
A29
23
A30
A31
A32
A33
24
A34
A35
A36
A37
25
A38
A39
A40
A41
26
A42
A43
A44
A45
27
FC
TMC
KAT
TP7Q
28
EC, ENTRY CODE
PD
ND ID
DIVID
29
D0
MN
CC
IN
SC
CD
DE
DT
SA
NOCLI
30
CN1
CN2
CN3
CN4
31
ACIF
SS7 RELEASE CODE
NCIDSEQ
NL
RS
BIT 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15

Figure 30

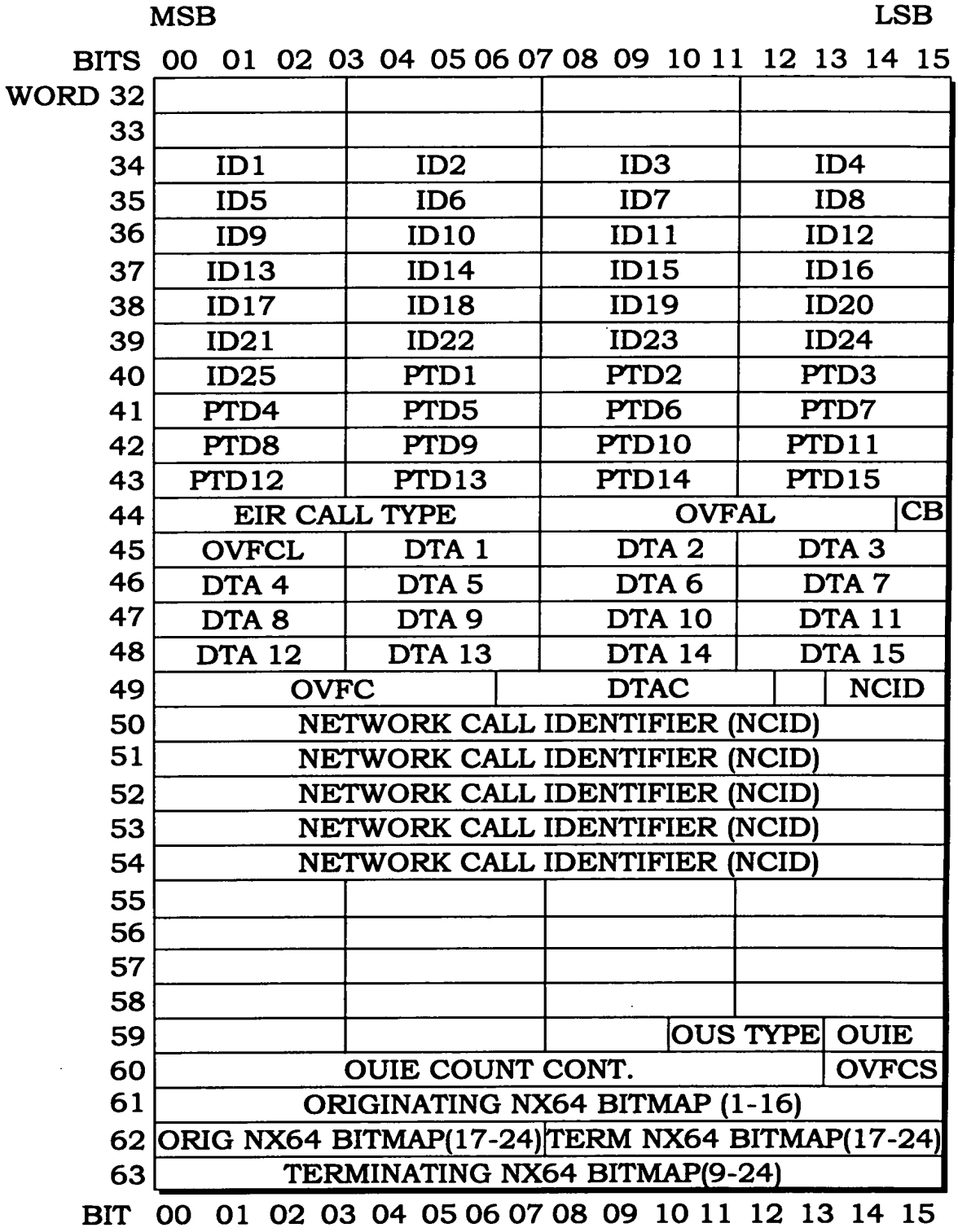

MSB
LSB
BITS 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
WORD 32
33
34 ID1 ID2 ID3 ID4
35 ID5 ID6 ID7 ID8
36 ID9 ID10 ID11 ID12
37 ID13 ID14 ID15 ID16
38 ID17 ID18 ID19 ID20
39 ID21 ID22 ID23 ID24
40 ID25 PTD1 PTD2 PTD3
41 PTD4 PTD5 PTD6 PTD7
42 PTD8 PTD9 PTD10 PTD11
43 PTD12 PTD13 PTD14 PTD15
44 EIR CALL TYPE OVFAL CB
45 OVFCL DTA 1 DTA 2 DTA 3
46 DTA 4 DTA 5 DTA 6 DTA 7
47 DTA 8 DTA 9 DTA 10 DTA 11
48 DTA 12 DTA 13 DTA 14 DTA 15
49 OVFC DTAC NCID
50 NETWORK CALL IDENTIFIER (NCID)
51 NETWORK CALL IDENTIFIER (NCID)
52 NETWORK CALL IDENTIFIER (NCID)
53 NETWORK CALL IDENTIFIER (NCID)
54 NETWORK CALL IDENTIFIER (NCID)
55
56
57
58
59 OUS TYPE OUIE
60 OUIE COUNT CONT. OVFCS
61 ORIGINATING NX64 BITMAP (1-16)
62 ORIG NX64 BITMAP(17-24) TERM NX64 BITMAP(17-24)
63 TERMINATING NX64 BITMAP(9-24)
BIT 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15

Figure 31

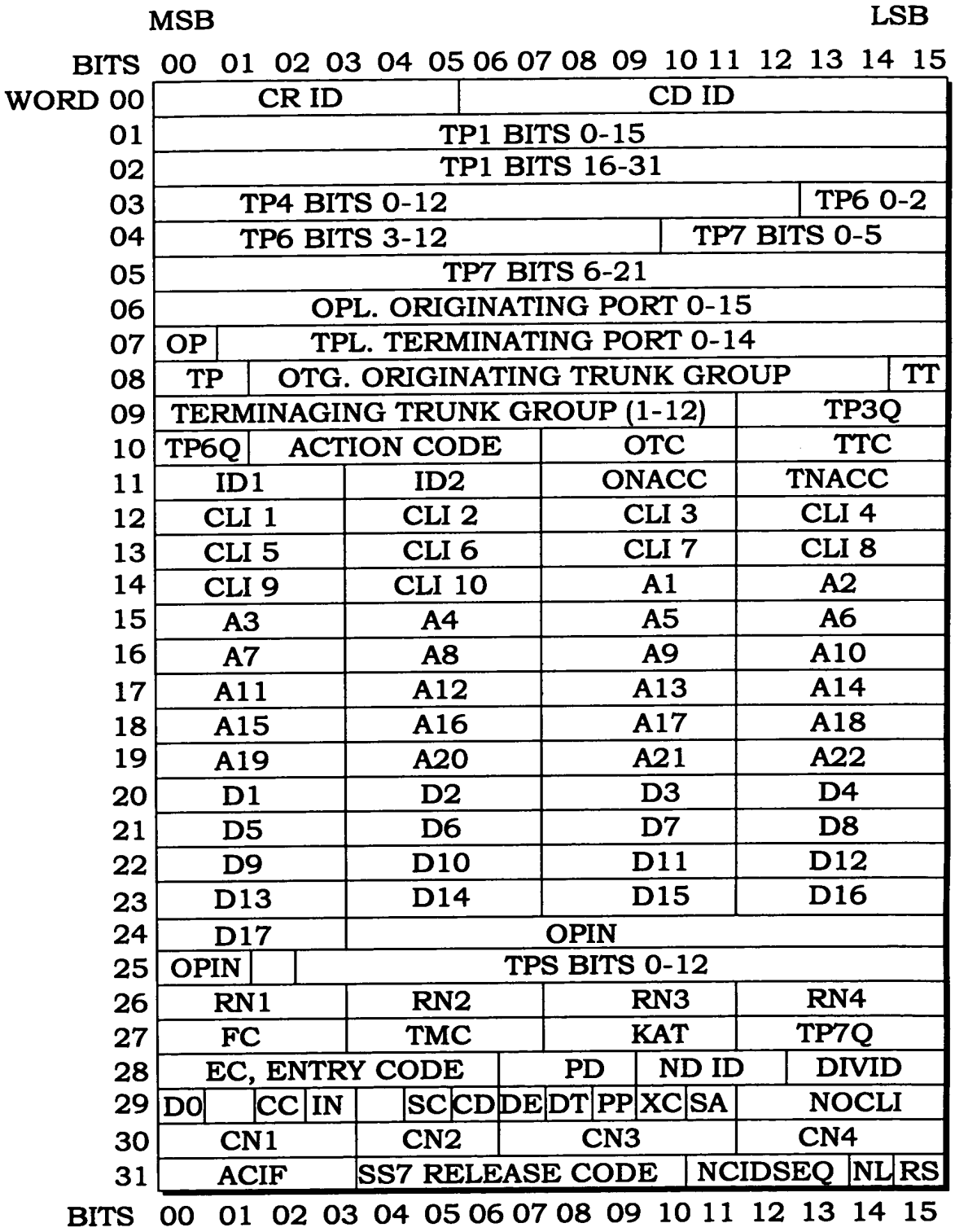
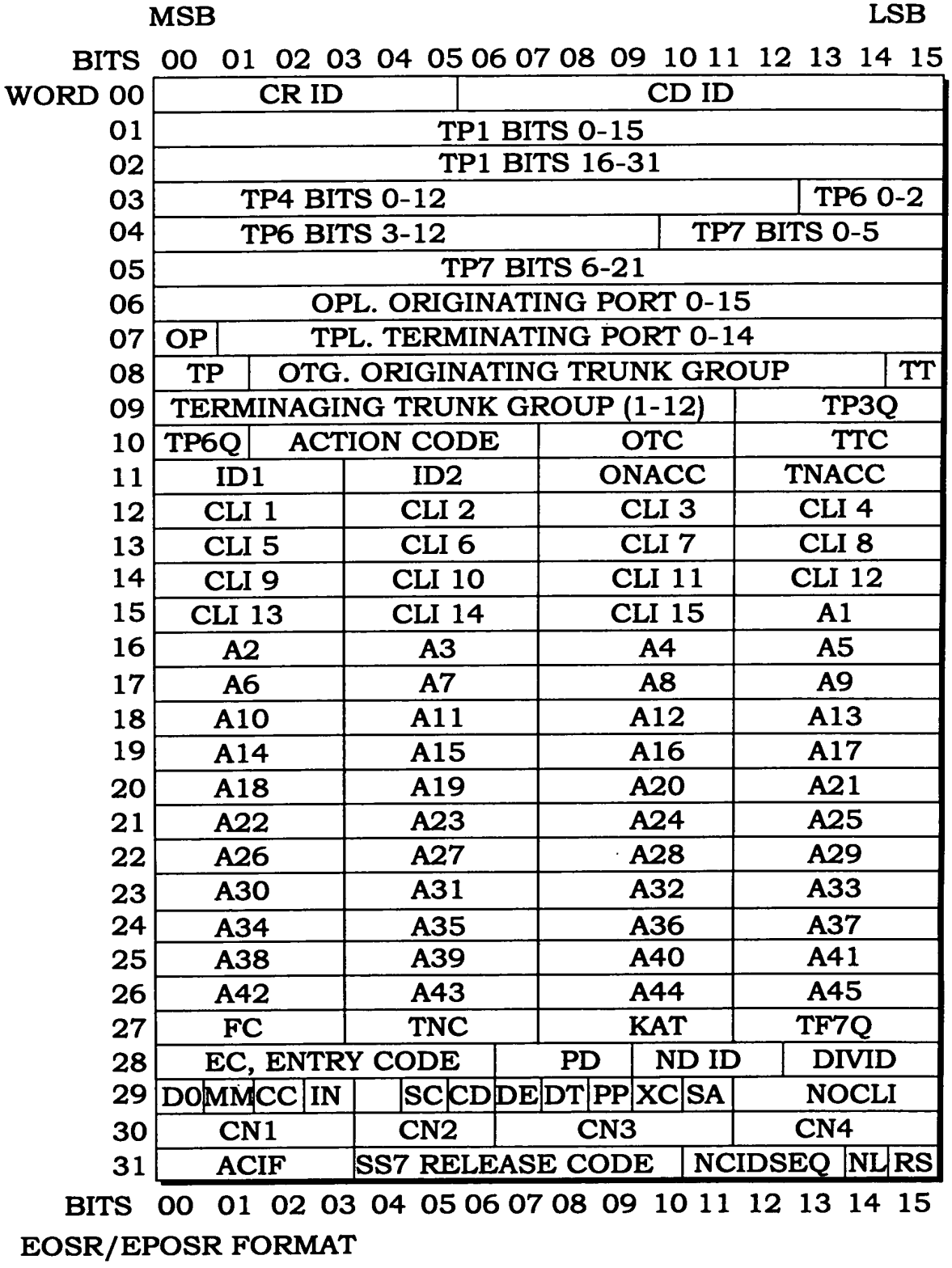

MSB
LSB
BITS 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
WORD 00
CR ID
CD ID
01
TP1 BITS 0-15
02
TP1 BITS 16-31
03
TP4 BITS 0-12
TP6 0-2
04
TP6 BITS 3-12
TP7 BITS 0-5
05
TP7 BITS 6-21
06
OPL. ORIGINATING PORT 0-15
07
OP
TPL. TERMINATING PORT 0-14
08
TP
OTG. ORIGINATING TRUNK GROUP
TT
09
TERMINAGING TRUNK GROUP (1-12)
TP3Q
10
TP6Q
ACTION CODE
OTC
TTC
11
ID1
ID2
ONACC
TNACC
12
CLI 1
CLI 2
CLI 3
CLI 4
13
CLI 5
CLI 6
CLI 7
CLI 8
14
CLI 9
CLI 10
A1
A2
15
A3
A4
A5
A6
16
A7
A8
A9
A10
17
A11
A12
A13
A14
18
A15
A16
A17
A18
19
A19
A20
A21
A22
20
D1
D2
D3
D4
21
D5
D6
D7
D8
22
D9
D10
D11
D12
23
D13
D14
D15
D16
24
D17
OPIN
25
OPIN
TPS BITS 0-12
26
RN1
RN2
RN3
RN4
27
FC
TMC
KAT
TP7Q
28
EC, ENTRY CODE
PD
ND ID
DIVID
29
D0
CC
IN
SC
CD
DE
DT
PP
XC
SA
NOCLI
30
CN1
CN2
CN3
CN4
31
ACIF
SS7 RELEASE CODE
NCIDSEQ
NL
RS
BITS 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15

Figure 32



EOSR/EPOSR FORMAT

Figure 33

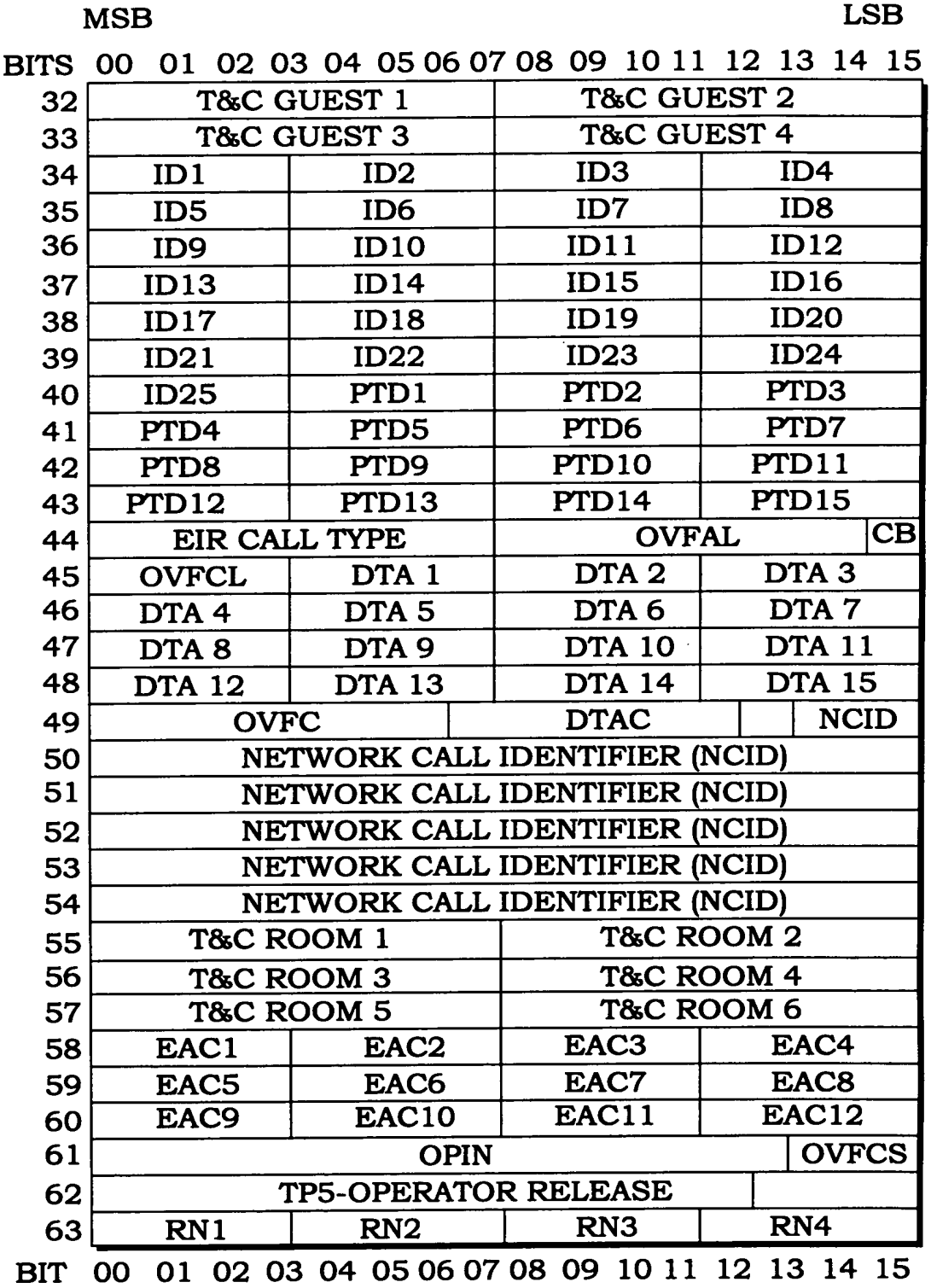

MSB
LSB
BITS 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
32 T&C GUEST 1 T&C GUEST 2
33 T&C GUEST 3 T&C GUEST 4
34 ID1 ID2 ID3 ID4
35 ID5 ID6 ID7 ID8
36 ID9 ID10 ID11 ID12
37 ID13 ID14 ID15 ID16
38 ID17 ID18 ID19 ID20
39 ID21 ID22 ID23 ID24
40 ID25 PTD1 PTD2 PTD3
41 PTD4 PTD5 PTD6 PTD7
42 PTD8 PTD9 PTD10 PTD11
43 PTD12 PTD13 PTD14 PTD15
44 EIR CALL TYPE OVFAL CB
45 OVFCL DTA 1 DTA 2 DTA 3
46 DTA 4 DTA 5 DTA 6 DTA 7
47 DTA 8 DTA 9 DTA 10 DTA 11
48 DTA 12 DTA 13 DTA 14 DTA 15
49 OVFC DTAC NCID
50 NETWORK CALL IDENTIFIER (NCID)
51 NETWORK CALL IDENTIFIER (NCID)
52 NETWORK CALL IDENTIFIER (NCID)
53 NETWORK CALL IDENTIFIER (NCID)
54 NETWORK CALL IDENTIFIER (NCID)
55 T&C ROOM 1 T&C ROOM 2
56 T&C ROOM 3 T&C ROOM 4
57 T&C ROOM 5 T&C ROOM 6
58 EAC1 EAC2 EAC3 EAC4
59 EAC5 EAC6 EAC7 EAC8
60 EAC9 EAC10 EAC11 EAC12
61 OPIN OVFCS
62 TP5-OPERATOR RELEASE
63 RN1 RN2 RN3 RN4
BIT 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15

Figure 34

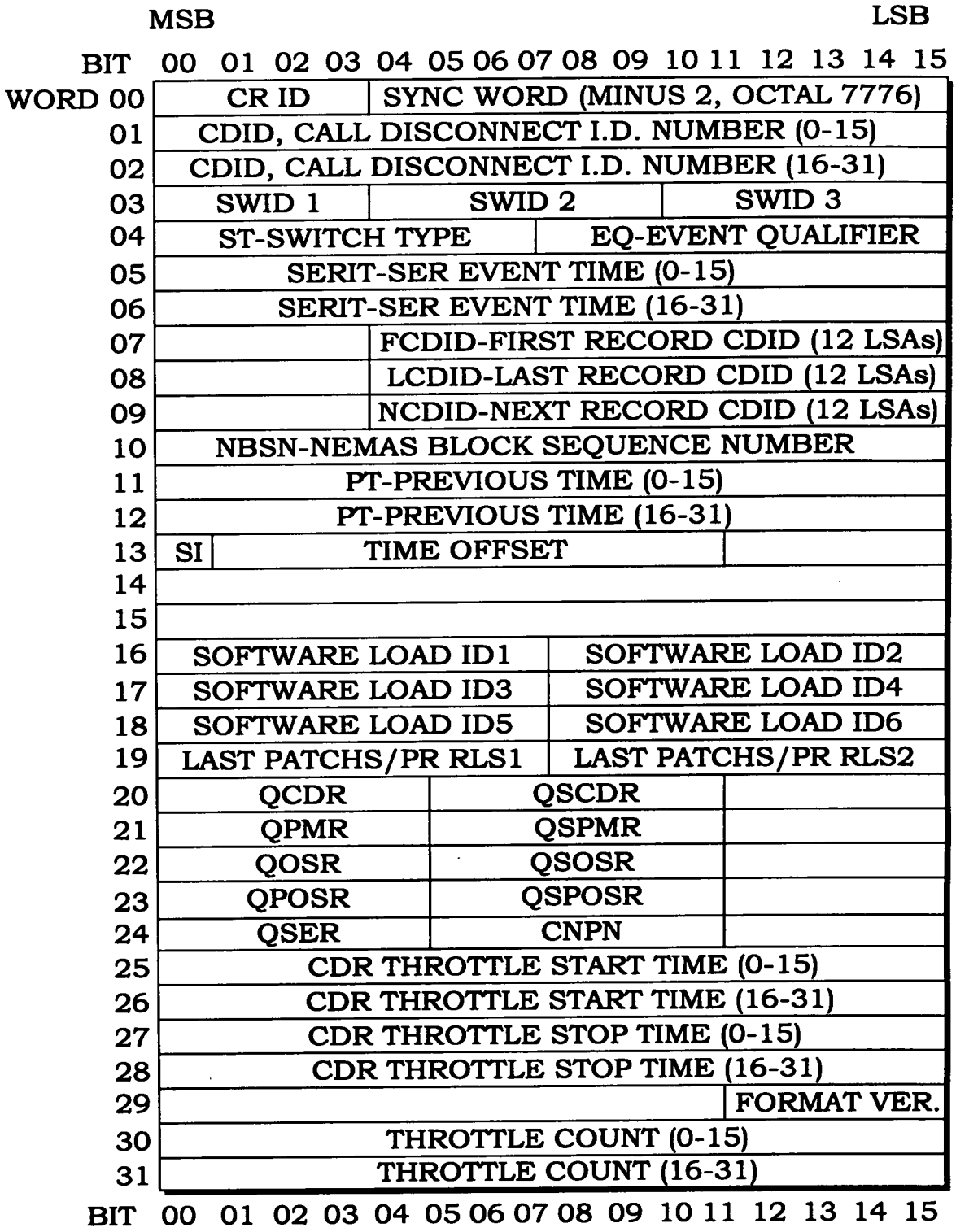

MSB
LSB
BIT 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
WORD 00 CR ID
SYNC WORD (MINUS 2, OCTAL 7776)
01 CDID, CALL DISCONNECT I.D. NUMBER (0-15)
02 CDID, CALL DISCONNECT I.D. NUMBER (16-31)
03 SWID 1
SWID 2
SWID 3
04 ST-SWITCH TYPE
EQ-EVENT QUALIFIER
05 SERIT-SER EVENT TIME (0-15)
06 SERIT-SER EVENT TIME (16-31)
07 FCDID-FIRST RECORD CDID (12 LSAs)
08 LCDID-LAST RECORD CDID (12 LSAs)
09 NCDID-NEXT RECORD CDID (12 LSAs)
10 NBSN-NEMAS BLOCK SEQUENCE NUMBER
11 PT-PREVIOUS TIME (0-15)
12 PT-PREVIOUS TIME (16-31)
13 SI
TIME OFFSET
14
15
16 SOFTWARE LOAD ID1
SOFTWARE LOAD ID2
17 SOFTWARE LOAD ID3
SOFTWARE LOAD ID4
18 SOFTWARE LOAD ID5
SOFTWARE LOAD ID6
19 LAST PATCHS/PR RLS1
LAST PATCHS/PR RLS2
20 QCDR
QSCDR
21 QPMR
QSPMR
22 QOSR
QSOSR
23 QPOSR
QSPOSR
24 QSER
CNPN
25 CDR THROTTLE START TIME (0-15)
26 CDR THROTTLE START TIME (16-31)
27 CDR THROTTLE STOP TIME (0-15)
28 CDR THROTTLE STOP TIME (16-31)
29 FORMAT VER.
30 THROTTLE COUNT (0-15)
31 THROTTLE COUNT (16-31)
BIT 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15

Figure 35

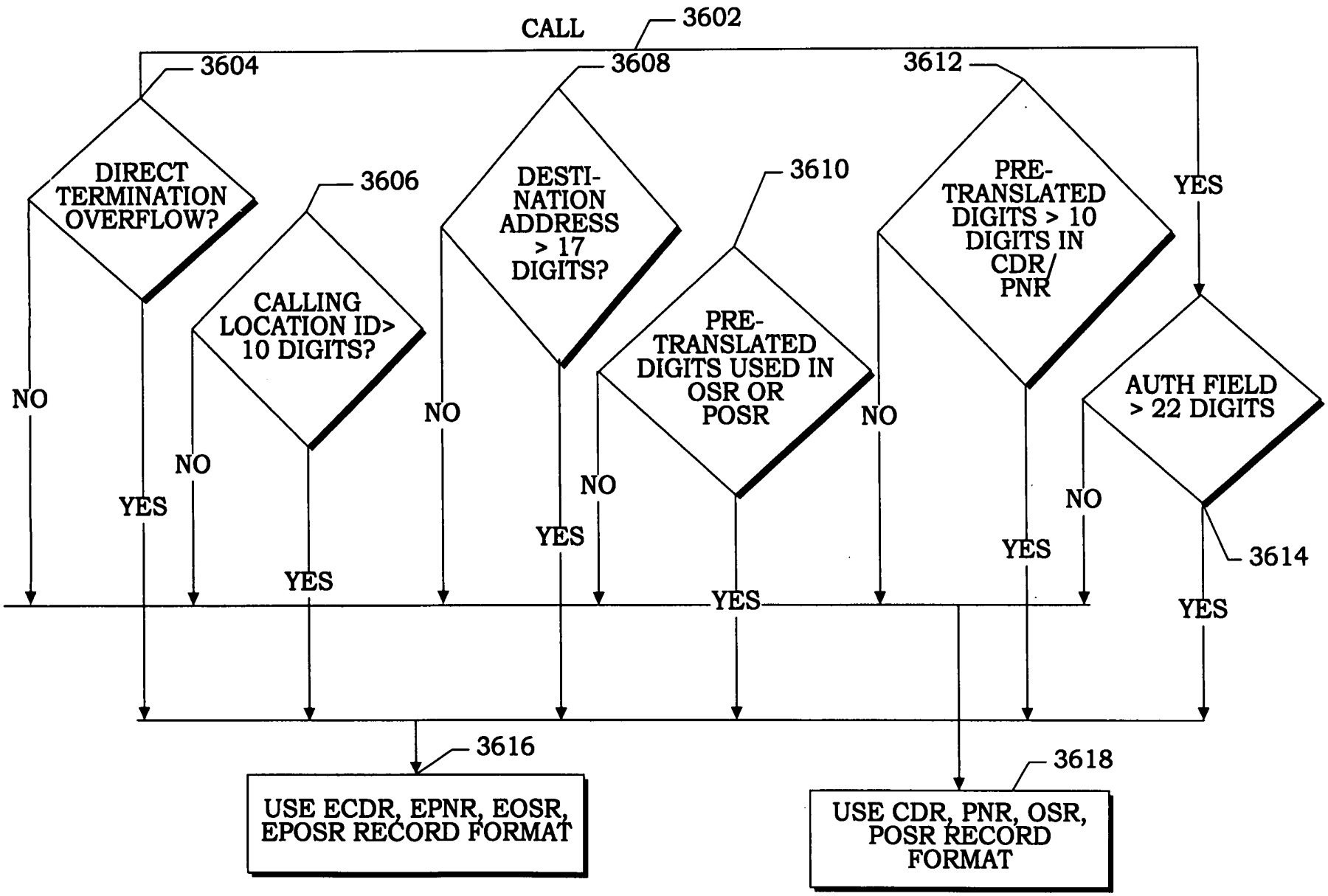

CALL
3602
3604
DIRECT TERMINATION OVERFLOW?
NO
YES
3606
CALLING LOCATION ID> 10 DIGITS?
NO
YES
3608
DESTI-NATION ADDRESS > 17 DIGITS?
NO
YES
3610
PRE-TRANSLATED DIGITS USED IN OSR OR POSR
NO
YES
3612
PRE-TRANSLATED DIGITS > 10 DIGITS IN CDR/ PNR
NO
YES
YES
AUTH FIELD > 22 DIGITS
NO
YES
3614
3616
USE ECDR, EPNR, EOSR, EPOSR RECORD FORMAT
3618
USE CDR, PNR, OSR, POSR RECORD FORMAT

Figure 36

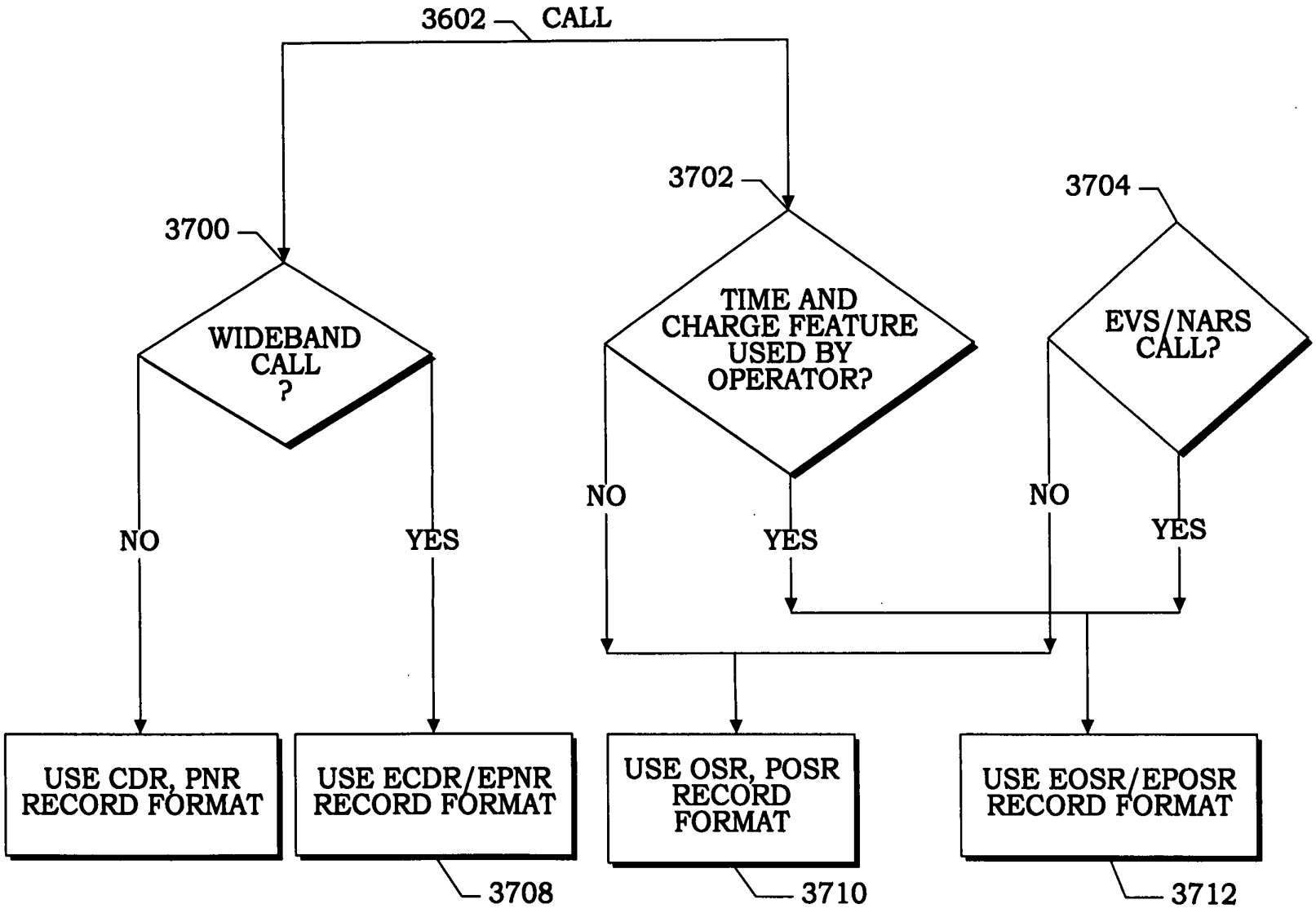

3602
CALL
3700
WIDEBAND CALL ?
NO
YES
3702
TIME AND CHARGE FEATURE USED BY OPERATOR?
NO
YES
3704
EVS/NARS CALL?
NO
YES
USE CDR, PNR RECORD FORMAT
USE ECDR/EPNR RECORD FORMAT
3708
USE OSR, POSR RECORD FORMAT
3710
USE EOSR/EPOSR RECORD FORMAT
3712

Figure 37

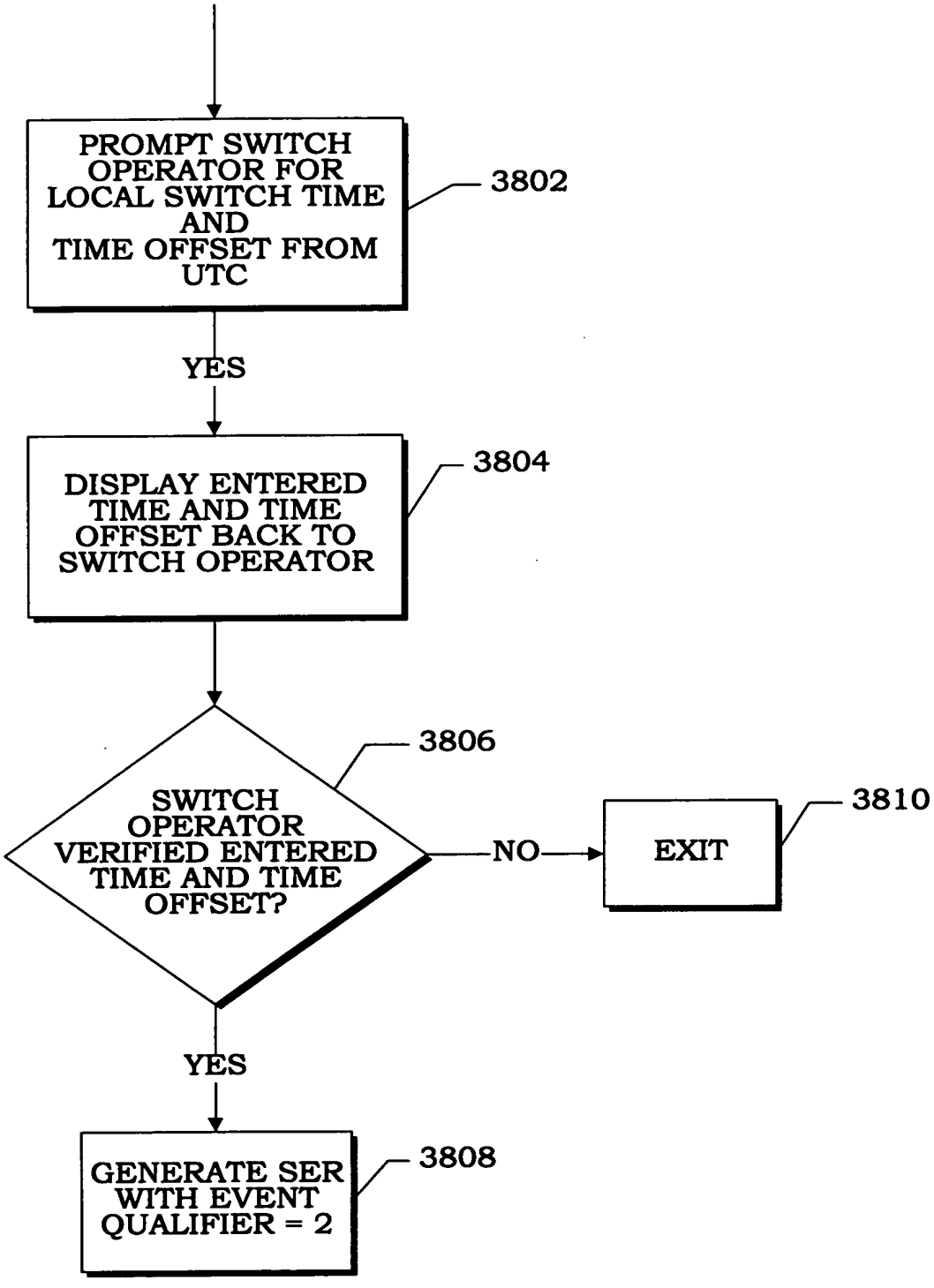

PROMPT SWITCH OPERATOR FOR LOCAL SWITCH TIME AND TIME OFFSET FROM UTC
3802
YES
DISPLAY ENTERED TIME AND TIME OFFSET BACK TO SWITCH OPERATOR
3804
SWITCH OPERATOR VERIFIED ENTERED TIME AND TIME OFFSET?
3806
NO
EXIT
3810
YES
GENERATE SER WITH EVENT QUALIFIER = 2
3808

Figure 38

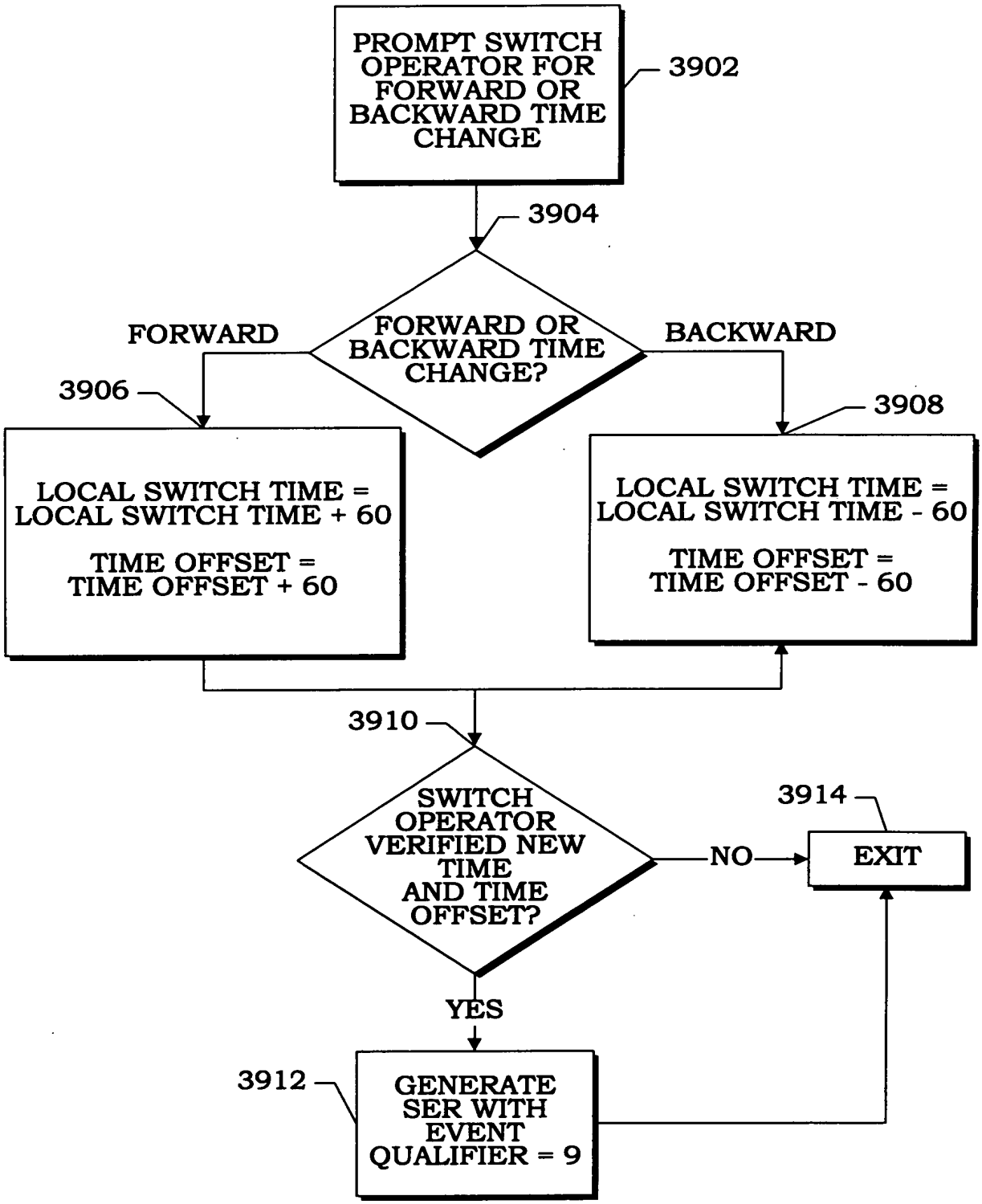

PROMPT SWITCH OPERATOR FOR FORWARD OR BACKWARD TIME CHANGE
3902
3904
FORWARD OR BACKWARD TIME CHANGE?
FORWARD
BACKWARD
3906
3908
LOCAL SWITCH TIME = LOCAL SWITCH TIME + 60
TIME OFFSET = TIME OFFSET + 60
LOCAL SWITCH TIME = LOCAL SWITCH TIME - 60
TIME OFFSET = TIME OFFSET - 60
3910
SWITCH OPERATOR VERIFIED NEW TIME AND TIME OFFSET?
NO
3914
EXIT
YES
3912
GENERATE SER WITH EVENT QUALIFIER = 9

Figure 39

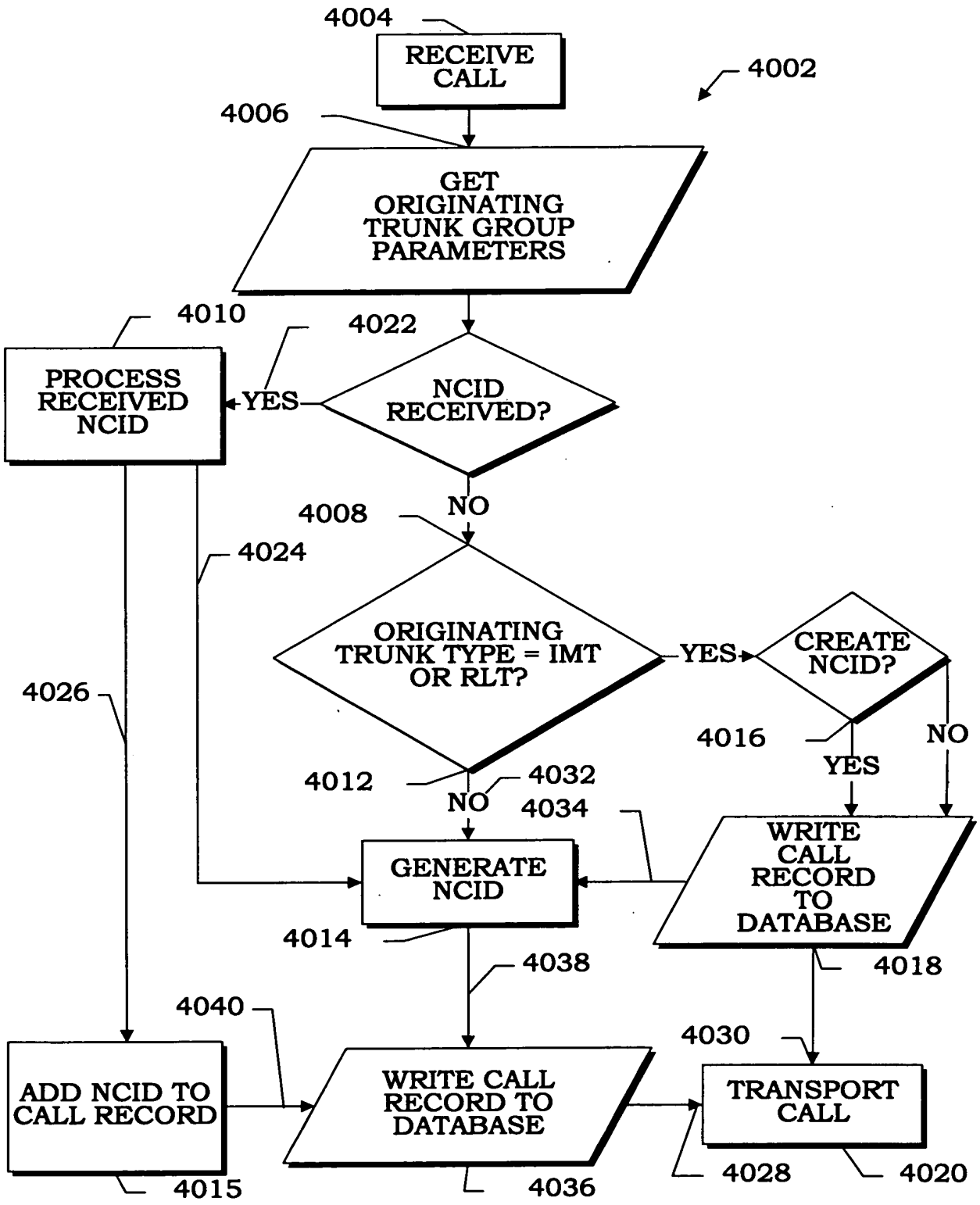

4004
RECEIVE CALL
4002
4006
GET ORIGINATING TRUNK GROUP PARAMETERS
4010
4022
PROCESS RECEIVED NCID
YES
NCID RECEIVED?
NO
4008
4024
ORIGINATING TRUNK TYPE = IMT OR RLT?
YES
CREATE NCID?
4026
4016
NO
YES
4012
4032
NO
4034
GENERATE NCID
WRITE CALL RECORD TO DATABASE
4014
4038
4018
4040
4030
ADD NCID TO CALL RECORD
WRITE CALL RECORD TO DATABASE
TRANSPORT CALL
4028
4020
4015
4036

Figure 40

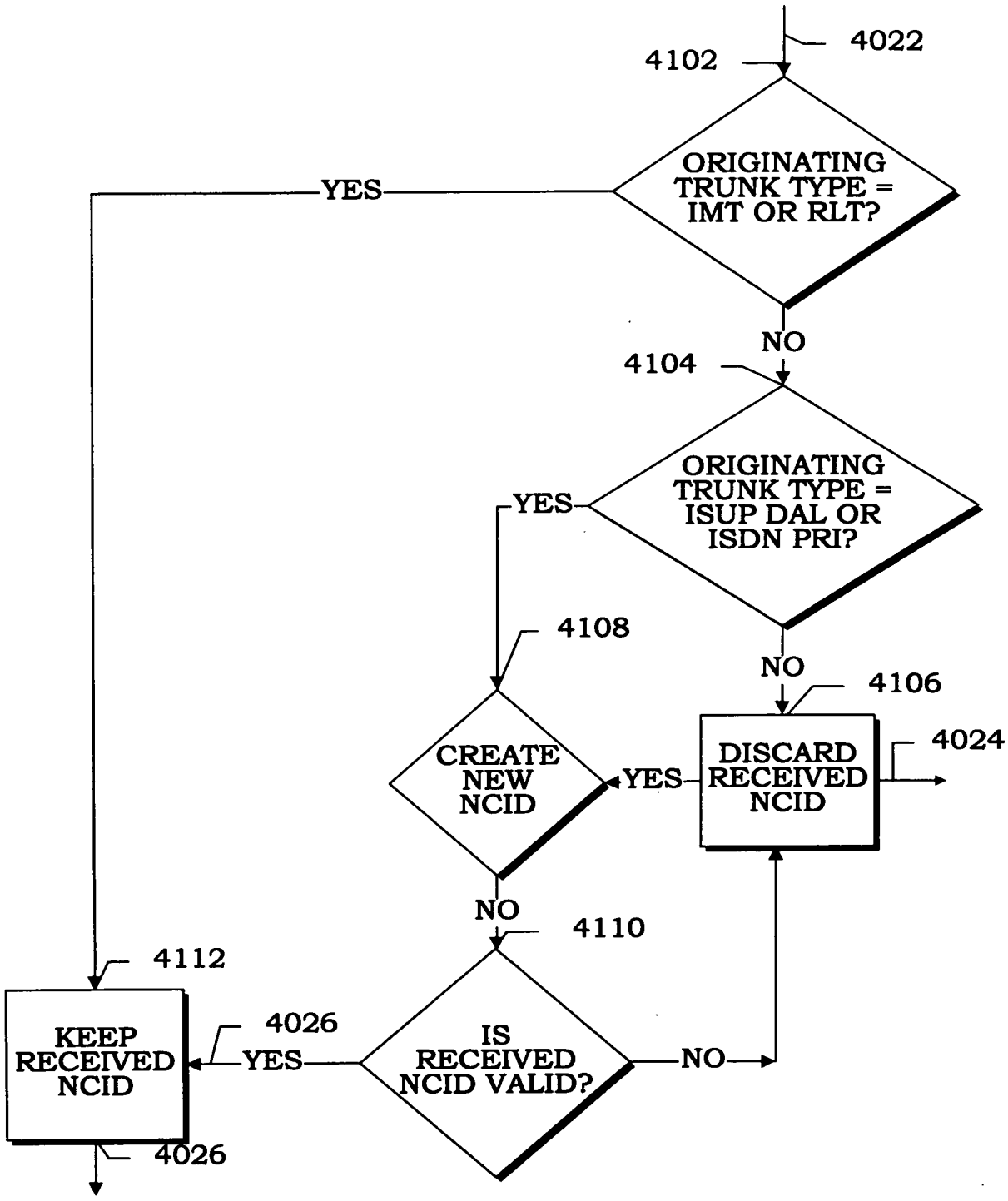

4022
4102
ORIGINATING TRUNK TYPE = IMT OR RLT?
YES
NO
4104
ORIGINATING TRUNK TYPE = ISUP DAL OR ISDN PRI?
YES
NO
4108
4106
CREATE NEW NCID
YES
DISCARD RECEIVED NCID
4024
NO
4110
4112
4026
KEEP RECEIVED NCID
YES
IS RECEIVED NCID VALID?
NO
4026

Figure 41

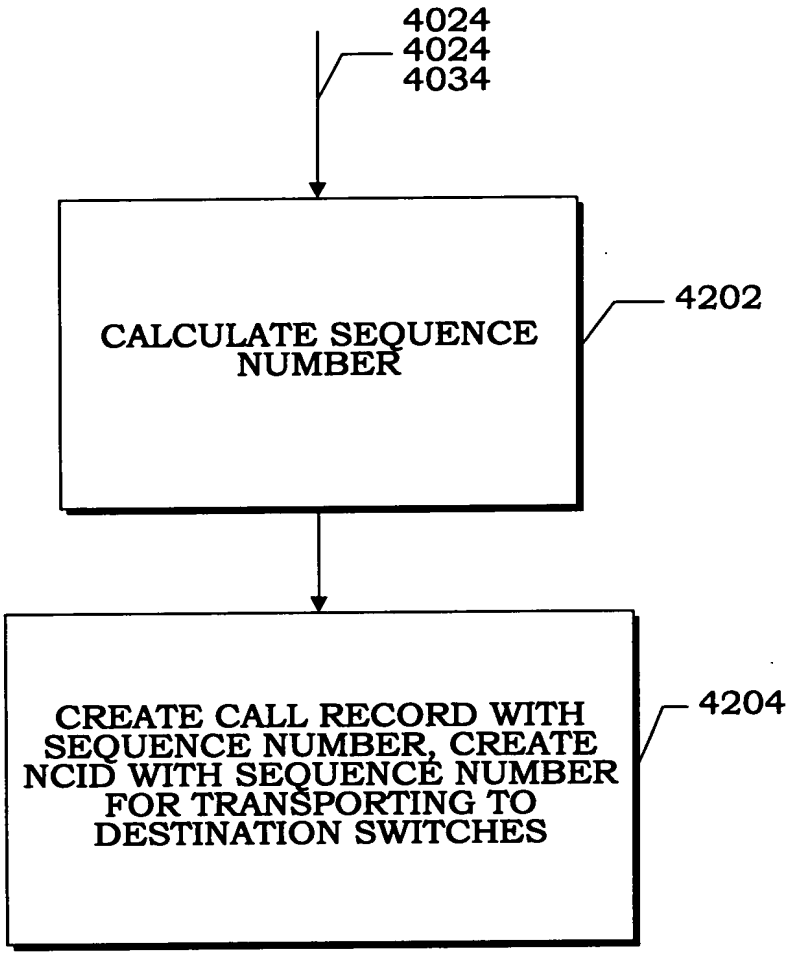

4024
4024
4034
CALCULATE SEQUENCE NUMBER
4202
CREATE CALL RECORD WITH SEQUENCE NUMBER, CREATE NCID WITH SEQUENCE NUMBER FOR TRANSPORTING TO DESTINATION SWITCHES
4204

Figure 42

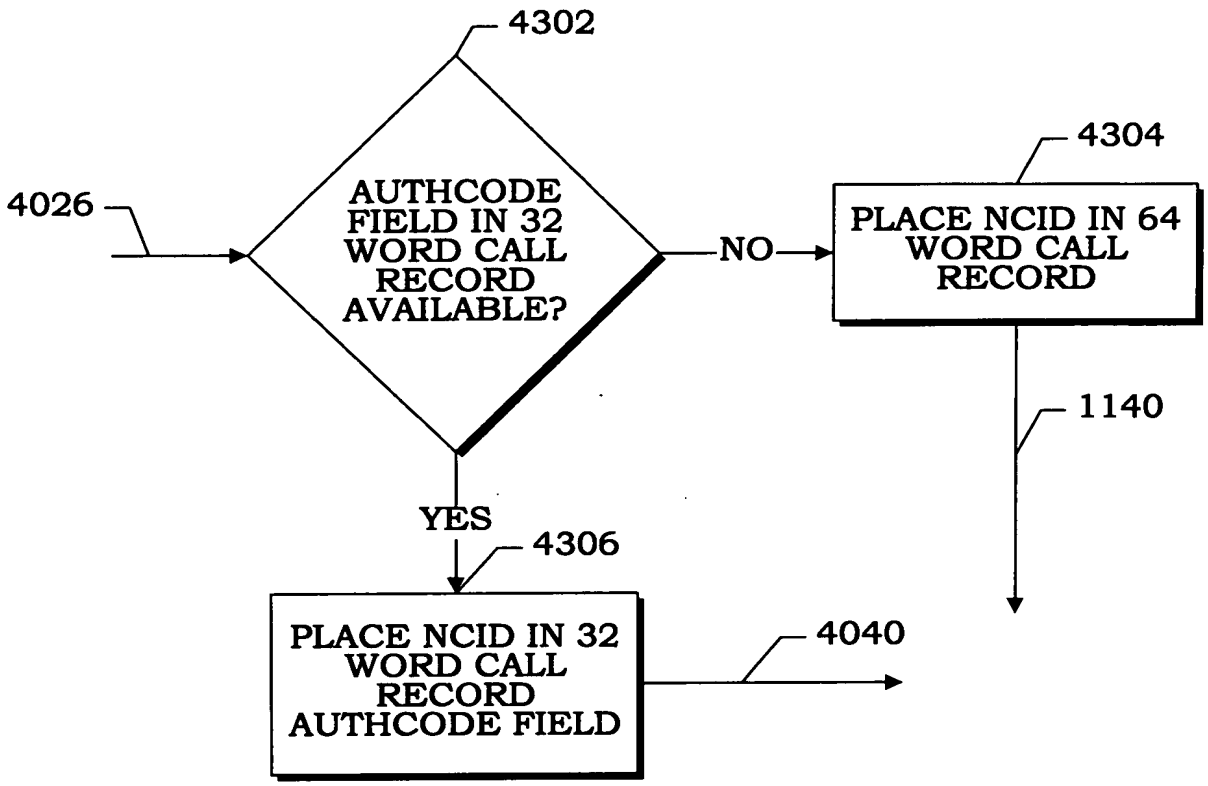

4302
AUTHCODE FIELD IN 32 WORD CALL RECORD AVAILABLE?
4026
NO
4304
PLACE NCID IN 64 WORD CALL RECORD
1140
YES
4306
PLACE NCID IN 32 WORD CALL RECORD AUTHCODE FIELD
4040

Figure 43

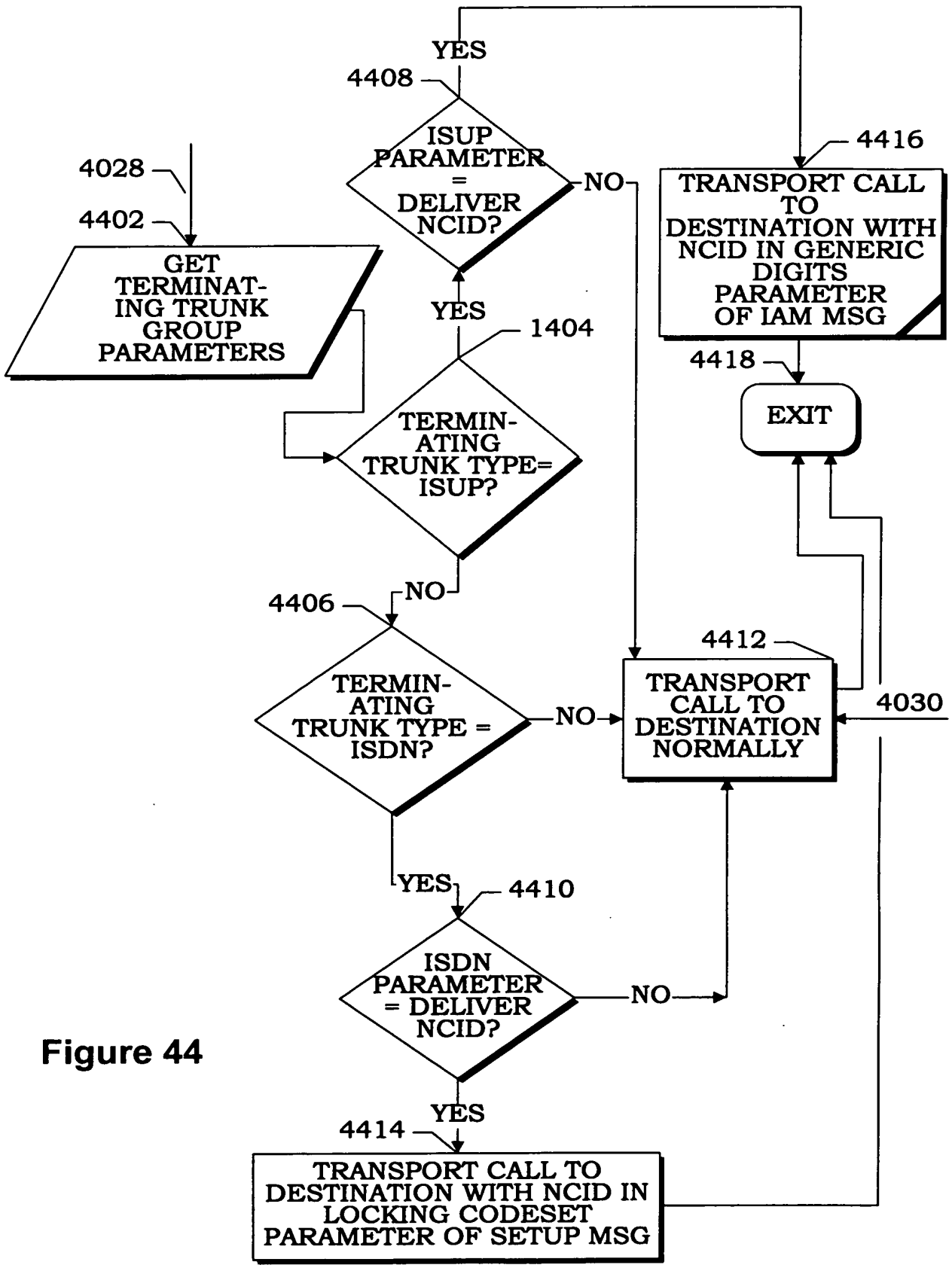

4028
4402
GET TERMINAT-ING TRUNK GROUP PARAMETERS
4408
ISUP PARAMETER = DELIVER NCID?
YES
NO
4416
TRANSPORT CALL TO DESTINATION WITH NCID IN GENERIC DIGITS PARAMETER OF IAM MSG
4418
EXIT
1404
TERMIN-ATING TRUNK TYPE= ISUP?
YES
NO
4406
TERMIN-ATING TRUNK TYPE = ISDN?
NO
4412
TRANSPORT CALL TO DESTINATION NORMALLY
4030
YES
4410
ISDN PARAMETER = DELIVER NCID?
NO
YES
4414
TRANSPORT CALL TO DESTINATION WITH NCID IN LOCKING CODESET PARAMETER OF SETUP MSG

Figure 44

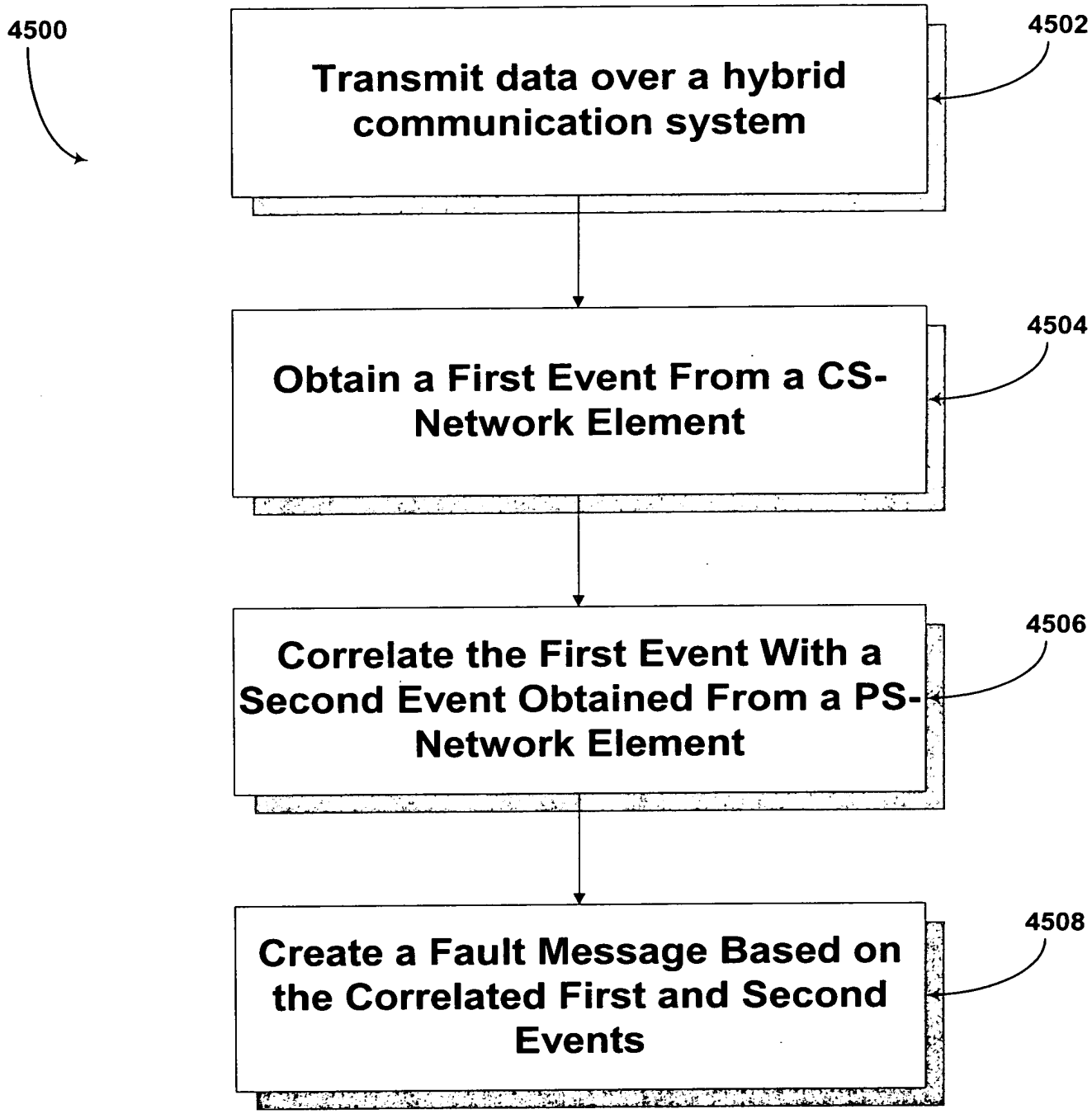

4500
Transmit data over a hybrid communication system
4502
Obtain a First Event From a CS-Network Element
4504
Correlate the First Event With a Second Event Obtained From a PS-Network Element
4506
Create a Fault Message Based on the Correlated First and Second Events
4508

Figure 45

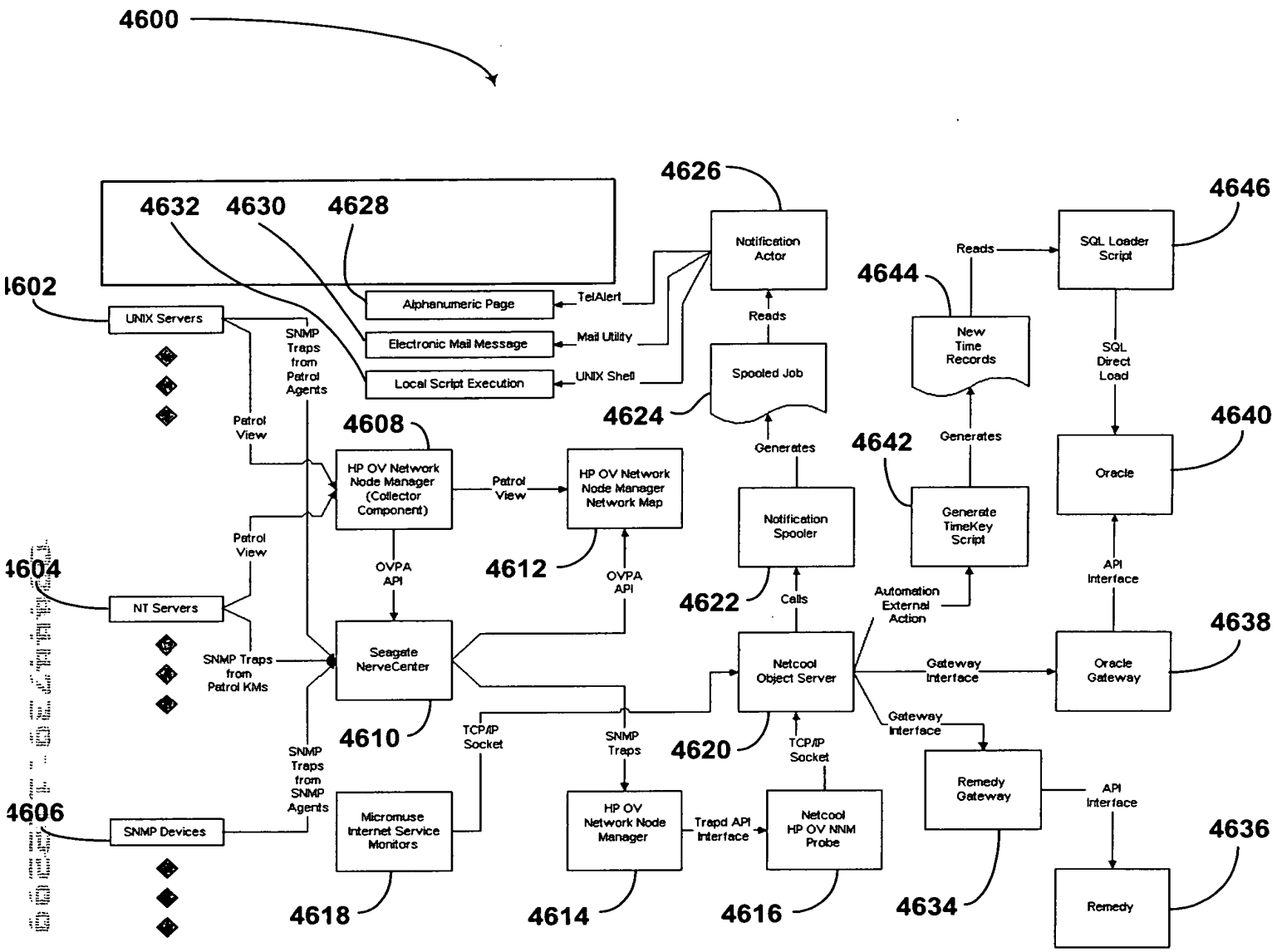

4600
4632
4630
4628
4626
4646
4602
UNIX Servers
Alphanumeric Page
TelAlert
Electronic Mail Message
Mail Utility
Local Script Execution
UNIX Shell
Notification Actor
Reads
SQL Loader Script
4644
New Time Records
SNMP Traps from Patrol Agents
Patrol View
4608
HP OV Network Node Manager (Collector Component)
Patrol View
HP OV Network Node Manager Network Map
Spooled Job
4624
Generates
SQL Direct Load
4640
Oracle
4642
Generate TimeKey Script
Notification Spooler
4622
Calls
4612
OVPA API
4604
NT Servers
SNMP Traps from Patrol KMs
Seagate NerveCenter
4610
Automation External Action
API Interface
4638
Oracle Gateway
Netcool Object Server
Gateway Interface
TCP/IP Socket
SNMP Traps
4620
4606
SNMP Devices
SNMP Traps from SNMP Agents
Micromuse Internet Service Monitors
4618
HP OV Network Node Manager
Trapd API Interface
Netcool HP OV NNM Probe
4614
4616
Remedy Gateway
4634
API Interface
4636
Remedy

Figure 46

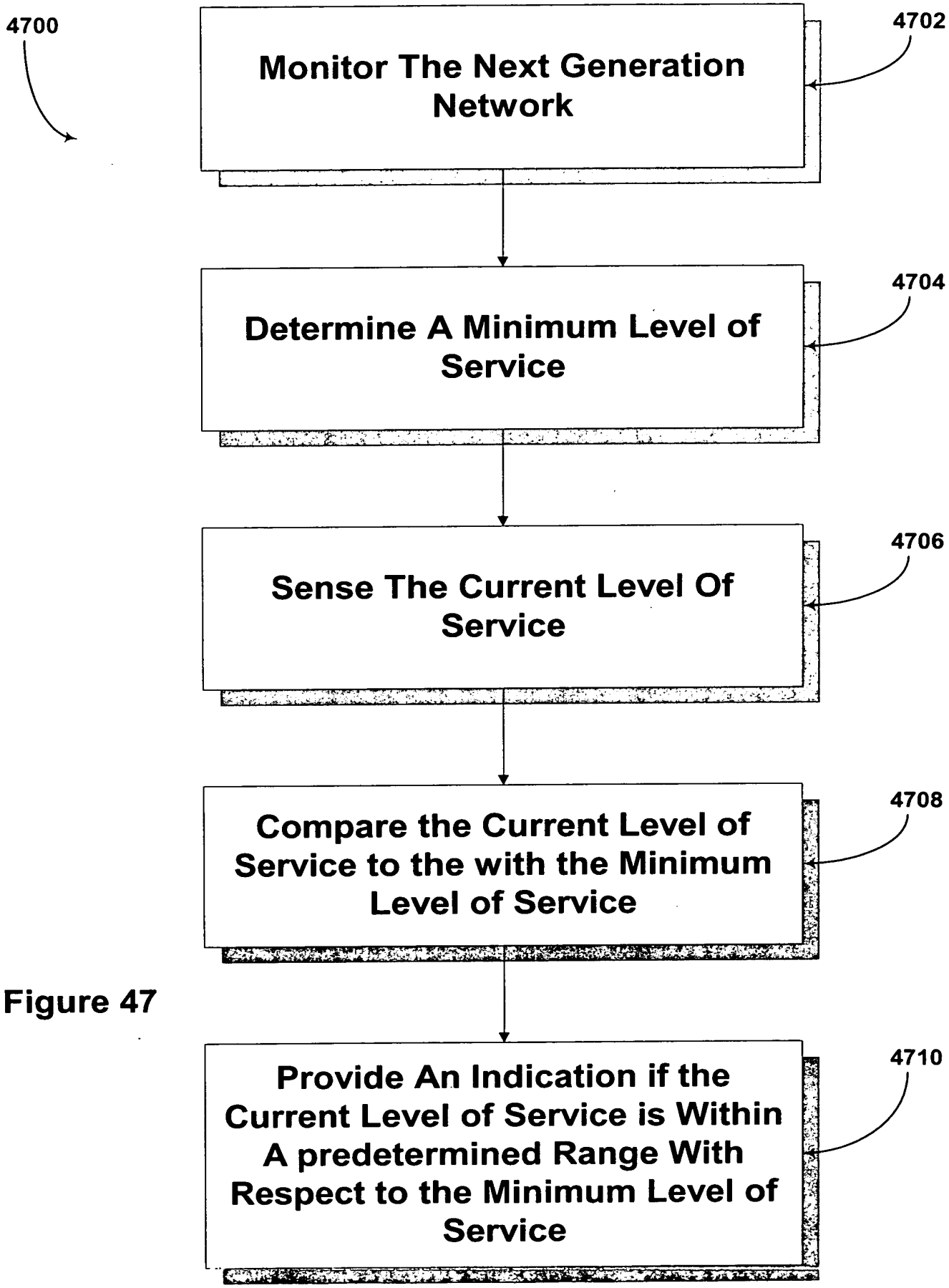

4700
Monitor The Next Generation Network
4702
Determine A Minimum Level of Service
4704
Sense The Current Level Of Service
4706
Compare the Current Level of Service to the with the Minimum Level of Service
4708
Provide An Indication if the Current Level of Service is Within A predetermined Range With Respect to the Minimum Level of Service
4710

Figure 47

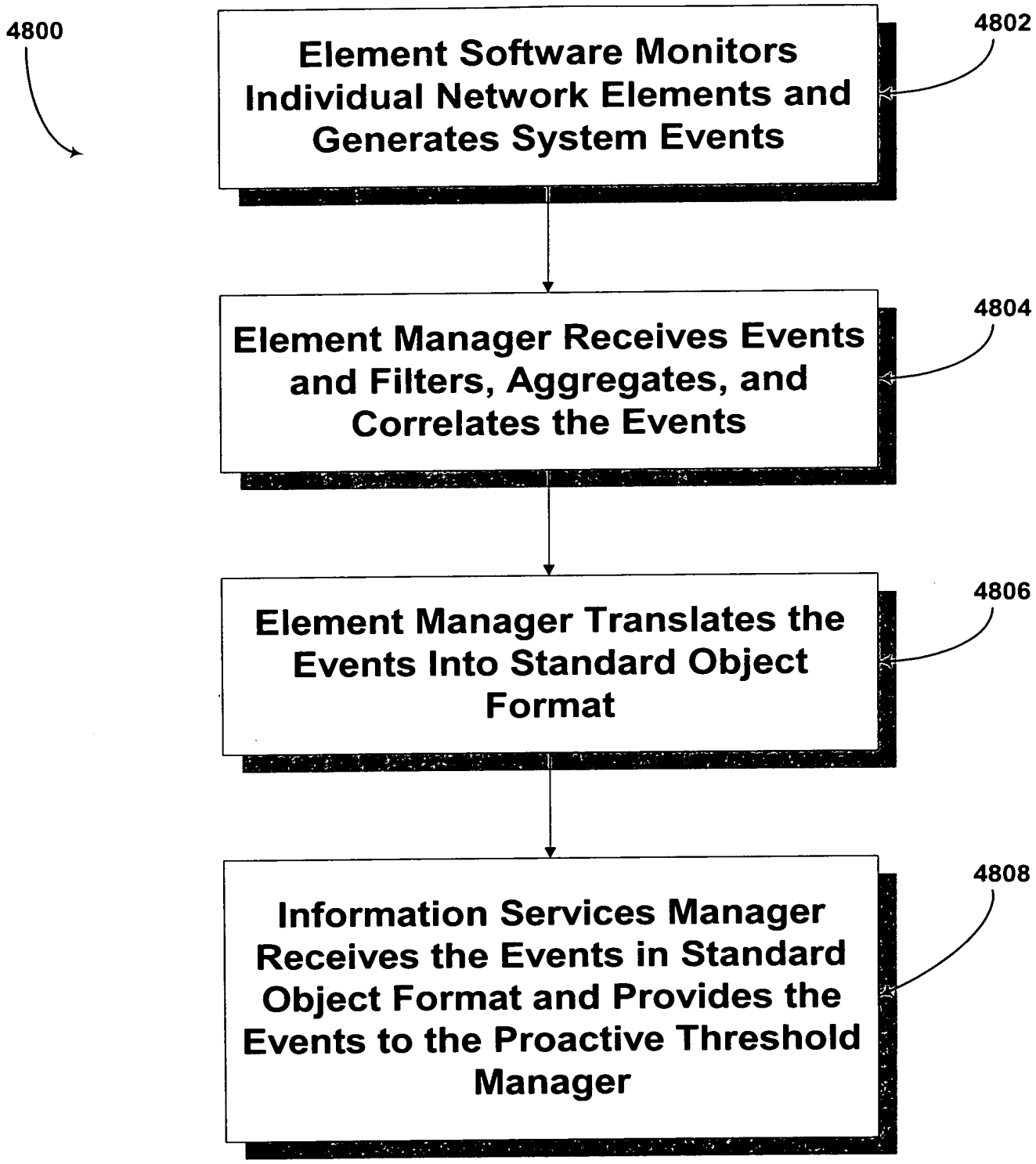

4800
Element Software Monitors Individual Network Elements and Generates System Events
4802
Element Manager Receives Events and Filters, Aggregates, and Correlates the Events
4804
Element Manager Translates the Events Into Standard Object Format
4806
Information Services Manager Receives the Events in Standard Object Format and Provides the Events to the Proactive Threshold Manager
4808

Figure 48

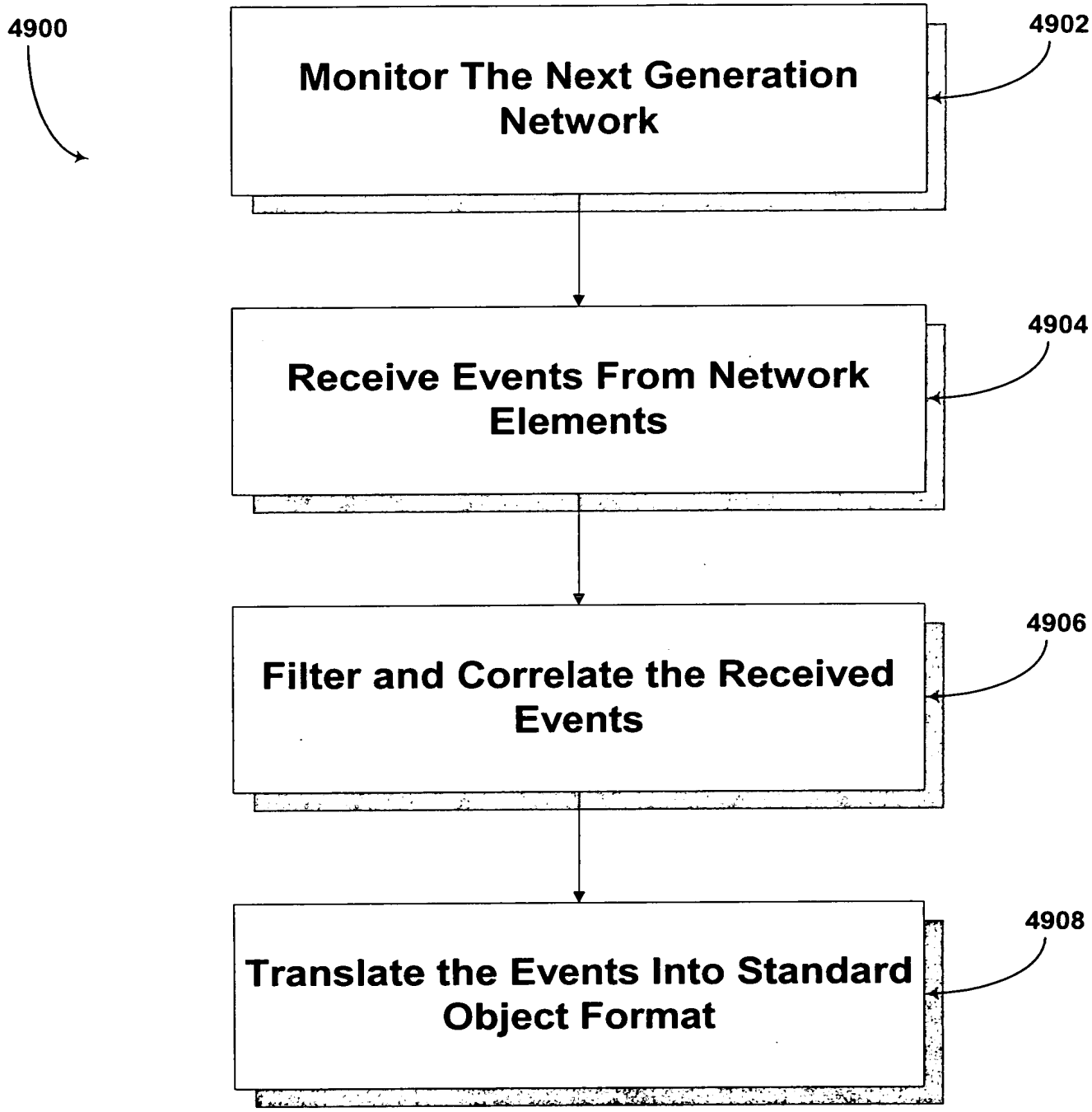

4900
Monitor The Next Generation Network
4902
Receive Events From Network Elements
4904
Filter and Correlate the Received Events
4906
Translate the Events Into Standard Object Format
4908

Figure 49

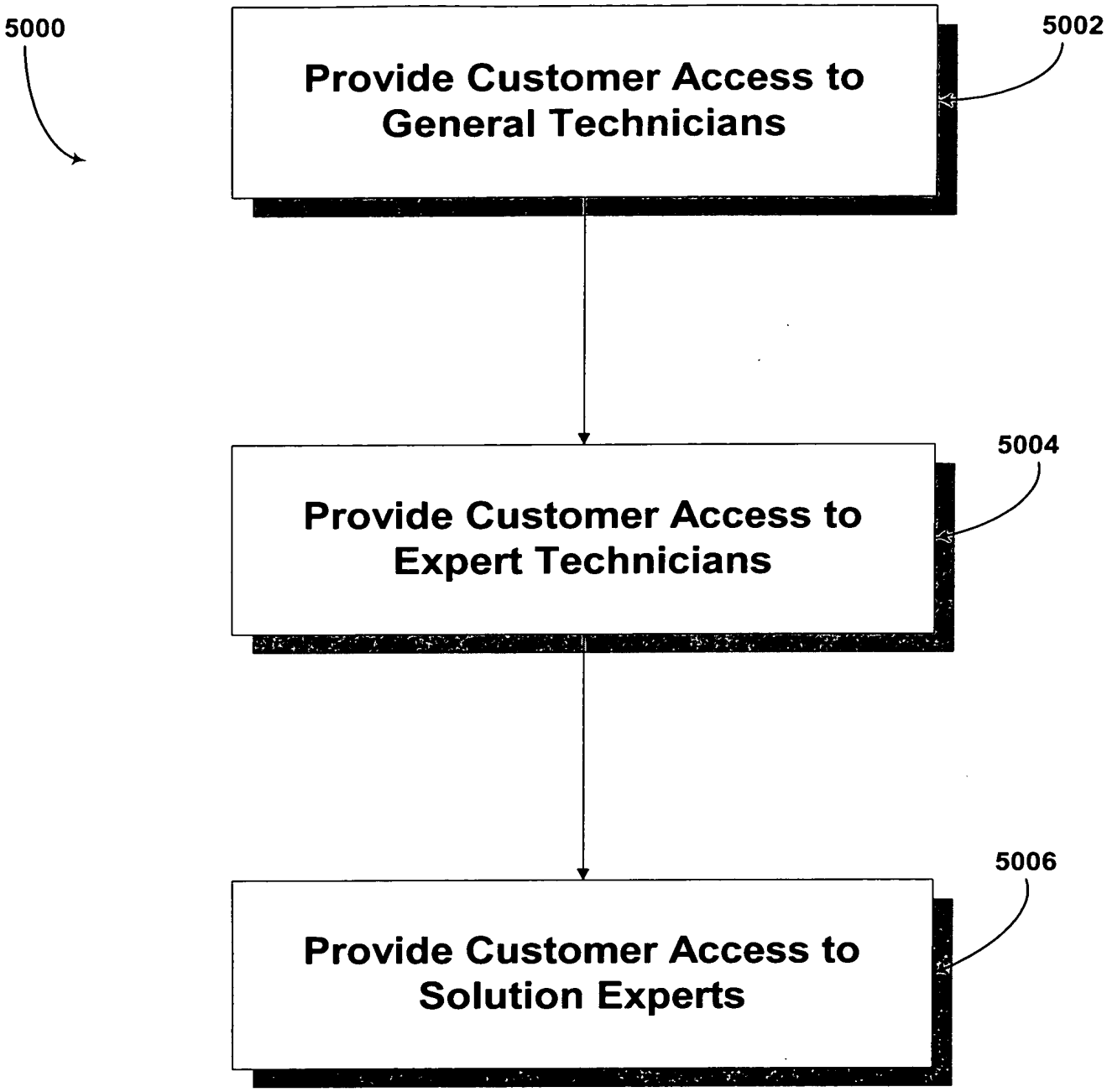

5000
Provide Customer Access to General Technicians
5002
Provide Customer Access to Expert Technicians
5004
Provide Customer Access to Solution Experts
5006

Figure 50

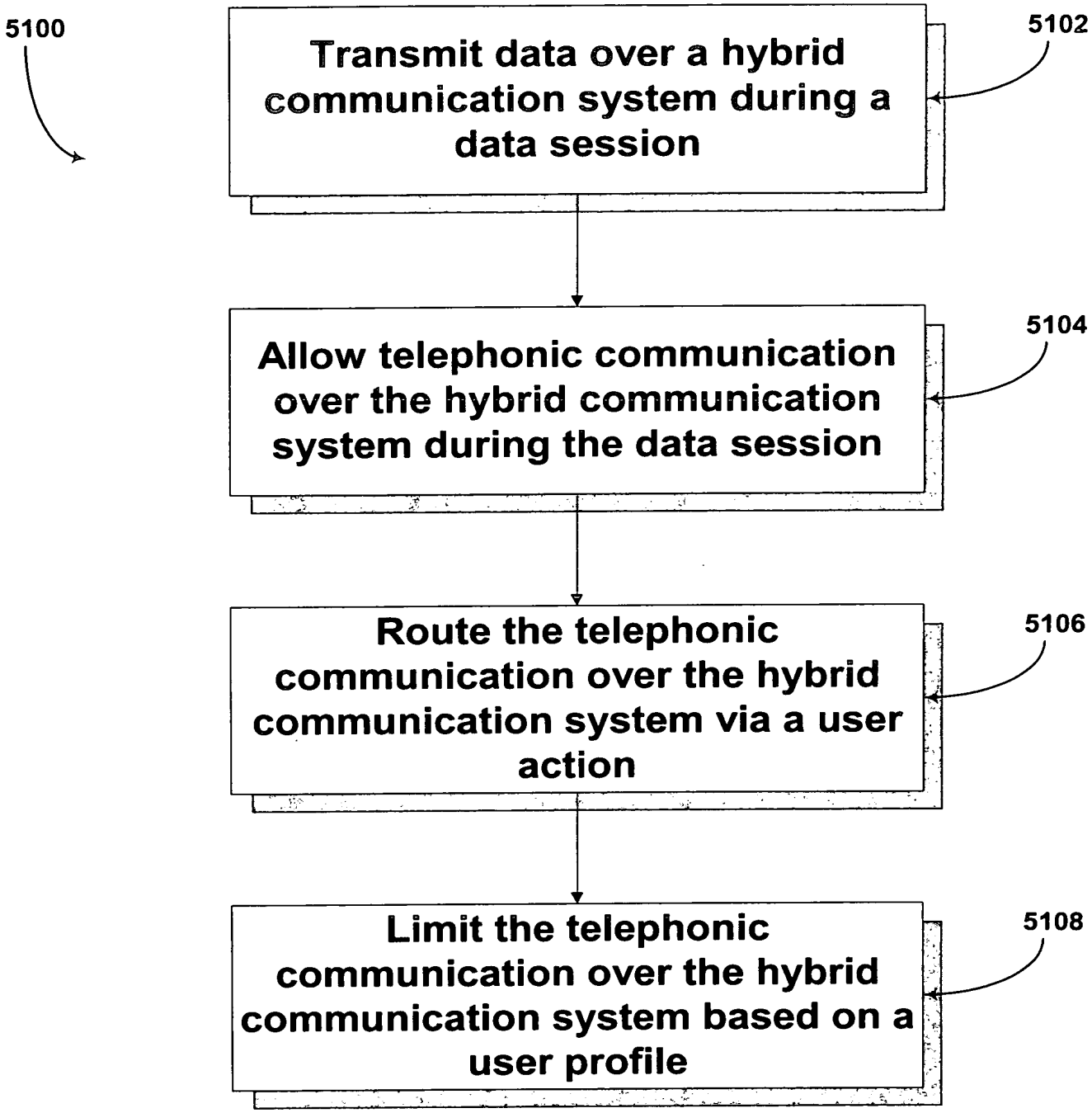

5100
Transmit data over a hybrid communication system during a data session
5102
Allow telephonic communication over the hybrid communication system during the data session
5104
Route the telephonic communication over the hybrid communication system via a user action
5106
Limit the telephonic communication over the hybrid communication system based on a user profile
5108

Figure 51

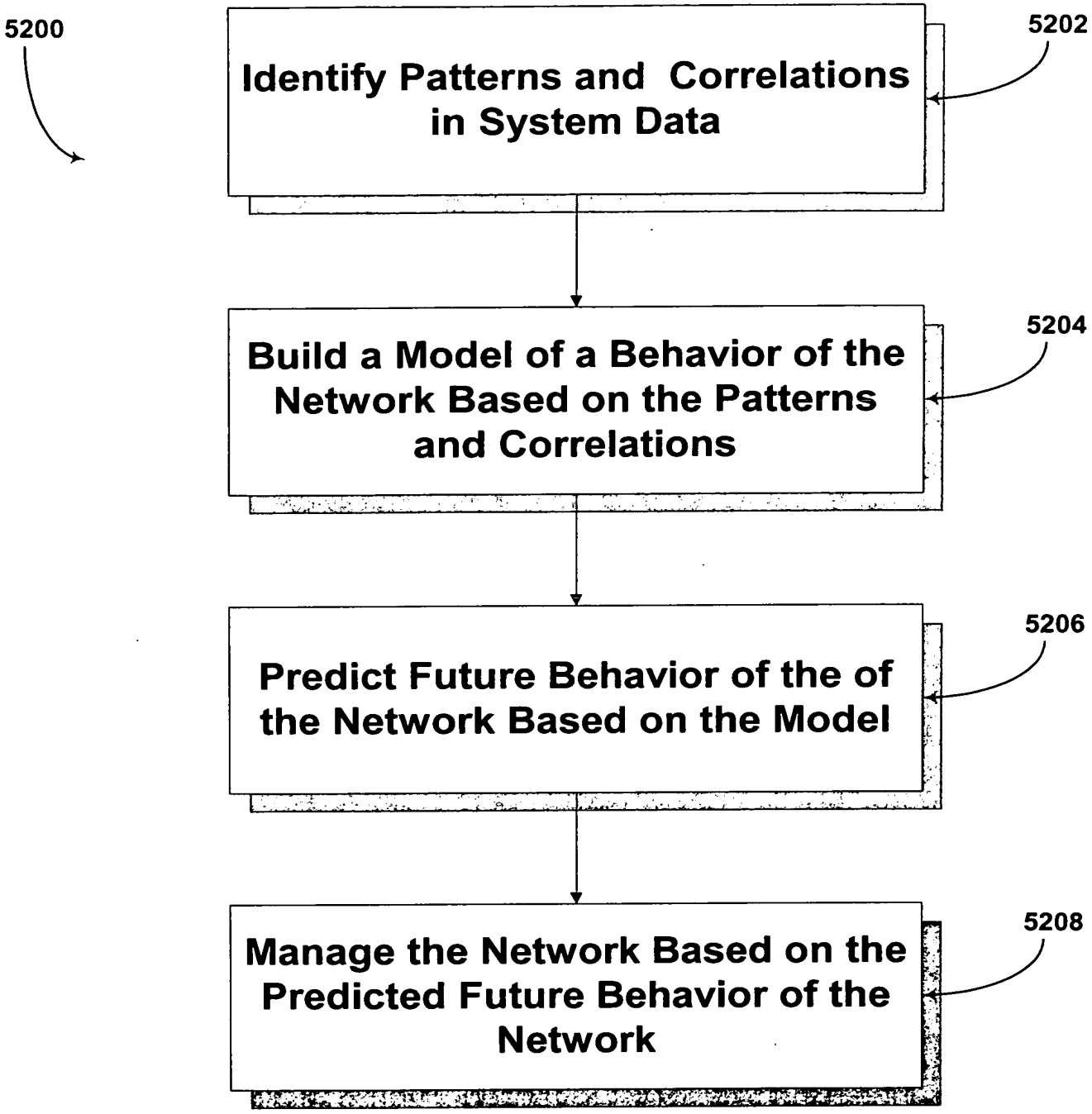

5200
Identify Patterns and Correlations in System Data
5202
Build a Model of a Behavior of the Network Based on the Patterns and Correlations
5204
Predict Future Behavior of the of the Network Based on the Model
5206
Manage the Network Based on the Predicted Future Behavior of the Network
5208

Figure 52

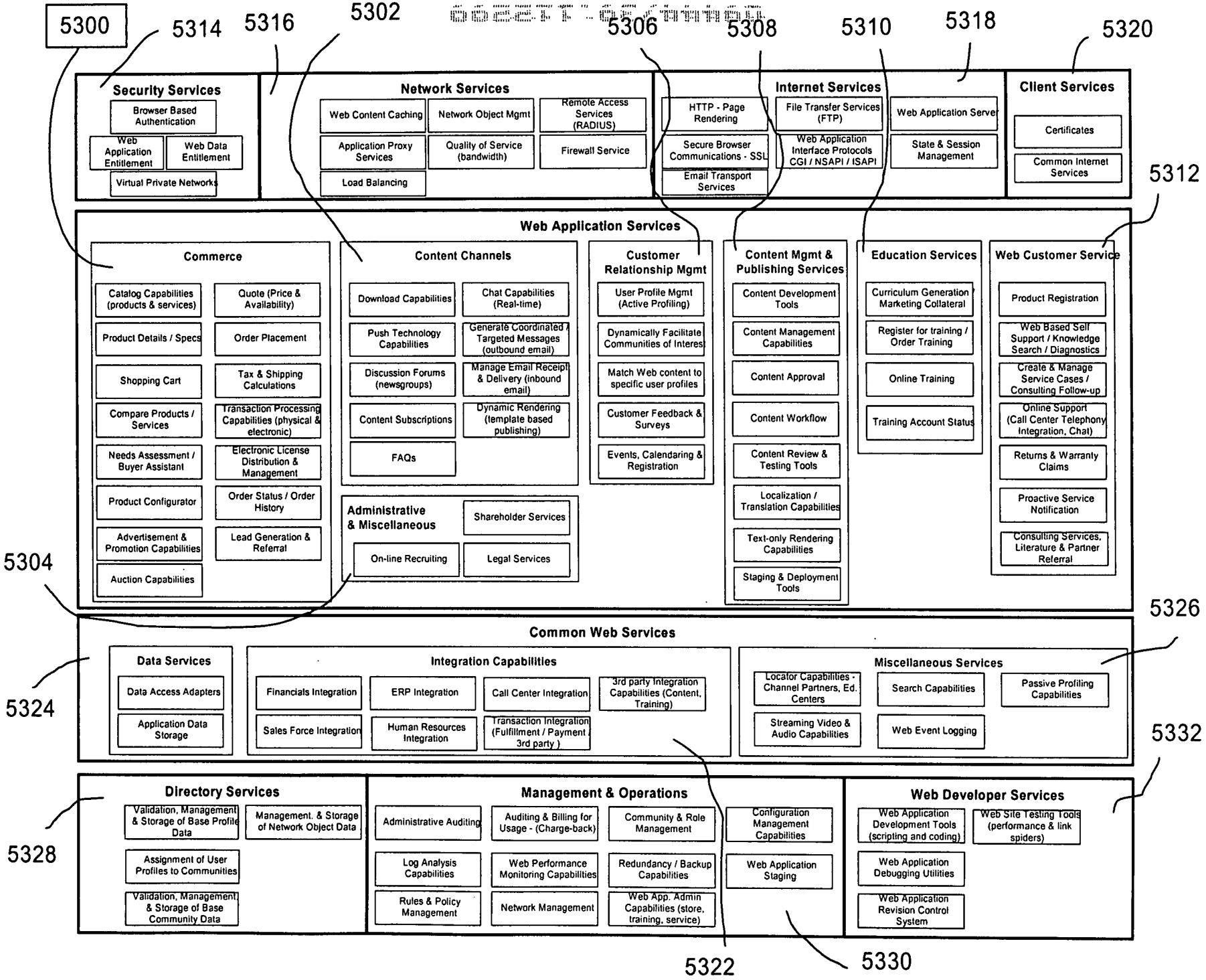

5300
5314
5316
5302
5306
5308
5310
5318
5320
Security Services
Browser Based Authentication
Web Application Entitlement
Web Data Entitlement
Virtual Private Networks
Network Services
Web Content Caching
Network Object Mgmt
Remote Access Services (RADIUS)
Application Proxy Services
Quality of Service (bandwidth)
Firewall Service
Load Balancing
Internet Services
HTTP - Page Rendering
File Transfer Services (FTP)
Web Application Server
Secure Browser Communications - SSL
Web Application Interface Protocols CGI / NSAPI / ISAPI
State & Session Management
Email Transport Services
Client Services
Certificates
Common Internet Services
5312
Web Application Services
Commerce
Catalog Capabilities (products & services)
Quote (Price & Availability)
Product Details / Specs
Order Placement
Shopping Cart
Tax & Shipping Calculations
Compare Products / Services
Transaction Processing Capabilities (physical & electronic)
Needs Assessment / Buyer Assistant
Electronic License Distribution & Management
Product Configurator
Order Status / Order History
Advertisement & Promotion Capabilities
Lead Generation & Referral
Auction Capabilities
Content Channels
Download Capabilities
Chat Capabilities (Real-time)
Push Technology Capabilities
Generate Coordinated / Targeted Messages (outbound email)
Discussion Forums (newsgroups)
Manage Email Receipt & Delivery (inbound email)
Content Subscriptions
Dynamic Rendering (template based publishing)
FAQs
Administrative & Miscellaneous
Shareholder Services
On-line Recruiting
Legal Services
Customer Relationship Mgmt
User Profile Mgmt (Active Profiling)
Dynamically Facilitate Communities of Interest
Match Web content to specific user profiles
Customer Feedback & Surveys
Events, Calendaring & Registration
Content Mgmt & Publishing Services
Content Development Tools
Content Management Capabilities
Content Approval
Content Workflow
Content Review & Testing Tools
Localization / Translation Capabilities
Text-only Rendering Capabilities
Staging & Deployment Tools
Education Services
Curriculum Generation Marketing Collateral
Register for training / Order Training
Online Training
Training Account Status
Web Customer Service
Product Registration
Web Based Self Support / Knowledge Search / Diagnostics
Create & Manage Service Cases / Consulting Follow-up
Online Support (Call Center Telephony Integration, Chat)
Returns & Warranty Claims
Proactive Service Notification
Consulting Services, Literature & Partner Referral
5304
5326
Common Web Services
5324
Data Services
Data Access Adapters
Application Data Storage
Integration Capabilities
Financials Integration
ERP Integration
Call Center Integration
3rd party Integration Capabilities (Content, Training)
Sales Force Integration
Human Resources Integration
Transaction Integration (Fulfillment / Payment / 3rd party)
Miscellaneous Services
Locator Capabilities - Channel Partners, Ed. Centers
Search Capabilities
Passive Profiling Capabilities
Streaming Video & Audio Capabilities
Web Event Logging
5332
5328
Directory Services
Validation, Management & Storage of Base Profile Data
Management. & Storage of Network Object Data
Assignment of User Profiles to Communities
Validation, Management & Storage of Base Community Data
Management & Operations
Administrative Auditing
Auditing & Billing for Usage - (Charge-back)
Community & Role Management
Configuration Management Capabilities
Log Analysis Capabilities
Web Performance Monitoring Capabilities
Redundancy / Backup Capabilities
Web Application Staging
Rules & Policy Management
Network Management
Web App. Admin Capabilities (store, training, service)
Web Developer Services
Web Application Development Tools (scripting and coding)
Web Site Testing Tools (performance & link spiders)
Web Application Debugging Utilities
Web Application Revision Control System
5322
5330

Figure 53

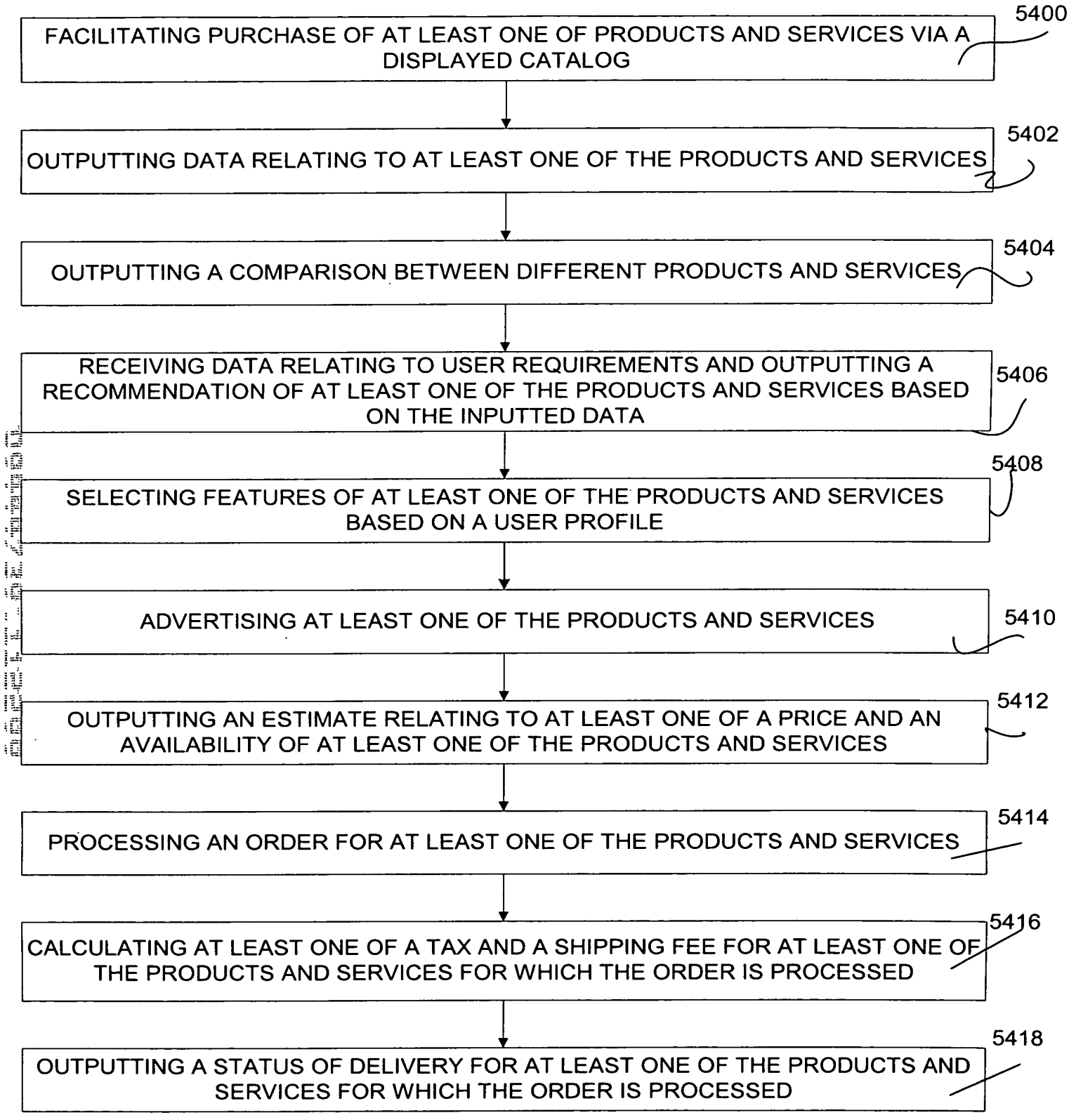

FACILITATING PURCHASE OF AT LEAST ONE OF PRODUCTS AND SERVICES VIA A DISPLAYED CATALOG
5400
OUTPUTTING DATA RELATING TO AT LEAST ONE OF THE PRODUCTS AND SERVICES
5402
OUTPUTTING A COMPARISON BETWEEN DIFFERENT PRODUCTS AND SERVICES
5404
RECEIVING DATA RELATING TO USER REQUIREMENTS AND OUTPUTTING A RECOMMENDATION OF AT LEAST ONE OF THE PRODUCTS AND SERVICES BASED ON THE INPUTTED DATA
5406
SELECTING FEATURES OF AT LEAST ONE OF THE PRODUCTS AND SERVICES BASED ON A USER PROFILE
5408
ADVERTISING AT LEAST ONE OF THE PRODUCTS AND SERVICES
5410
OUTPUTTING AN ESTIMATE RELATING TO AT LEAST ONE OF A PRICE AND AN AVAILABILITY OF AT LEAST ONE OF THE PRODUCTS AND SERVICES
5412
PROCESSING AN ORDER FOR AT LEAST ONE OF THE PRODUCTS AND SERVICES
5414
CALCULATING AT LEAST ONE OF A TAX AND A SHIPPING FEE FOR AT LEAST ONE OF THE PRODUCTS AND SERVICES FOR WHICH THE ORDER IS PROCESSED
5416
OUTPUTTING A STATUS OF DELIVERY FOR AT LEAST ONE OF THE PRODUCTS AND SERVICES FOR WHICH THE ORDER IS PROCESSED
5418
5300

Figure 54

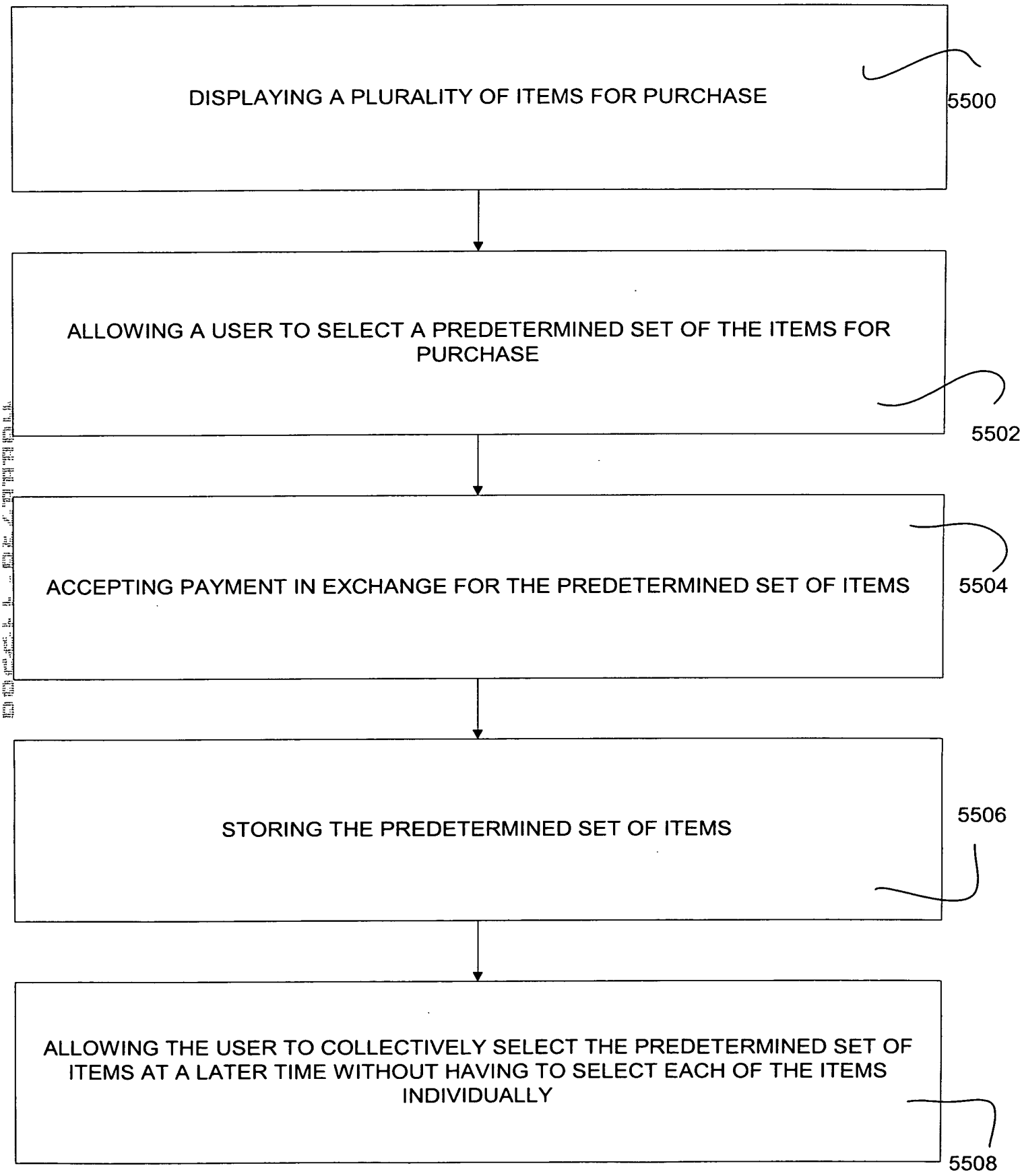

DISPLAYING A PLURALITY OF ITEMS FOR PURCHASE
5500
ALLOWING A USER TO SELECT A PREDETERMINED SET OF THE ITEMS FOR PURCHASE
5502
ACCEPTING PAYMENT IN EXCHANGE FOR THE PREDETERMINED SET OF ITEMS
5504
STORING THE PREDETERMINED SET OF ITEMS
5506
ALLOWING THE USER TO COLLECTIVELY SELECT THE PREDETERMINED SET OF ITEMS AT A LATER TIME WITHOUT HAVING TO SELECT EACH OF THE ITEMS INDIVIDUALLY
5508

Figure 55

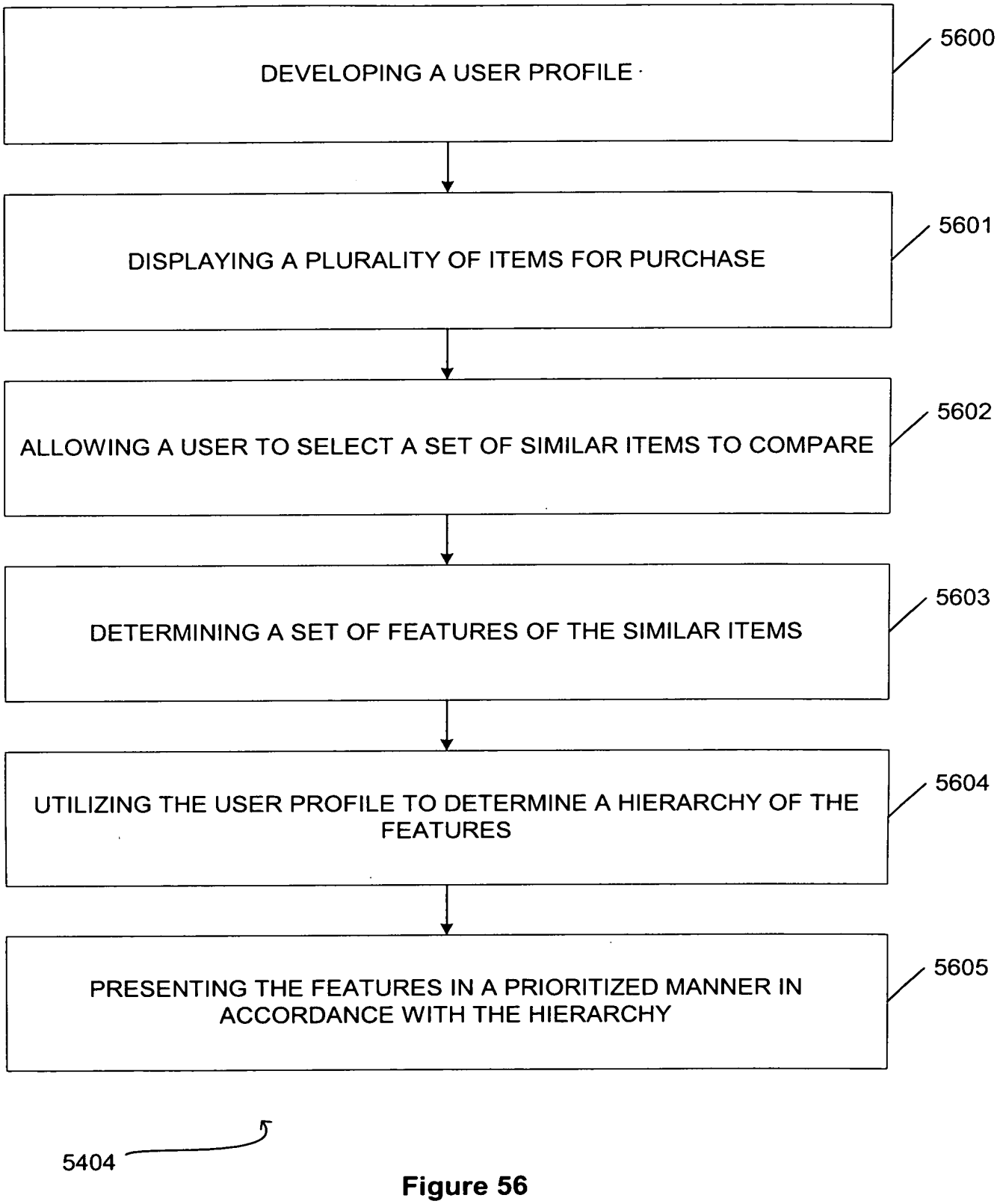

DEVELOPING A USER PROFILE
5600
DISPLAYING A PLURALITY OF ITEMS FOR PURCHASE
5601
ALLOWING A USER TO SELECT A SET OF SIMILAR ITEMS TO COMPARE
5602
DETERMINING A SET OF FEATURES OF THE SIMILAR ITEMS
5603
UTILIZING THE USER PROFILE TO DETERMINE A HIERARCHY OF THE FEATURES
5604
PRESENTING THE FEATURES IN A PRIORITIZED MANNER IN ACCORDANCE WITH THE HIERARCHY
5605
5404

Figure 56

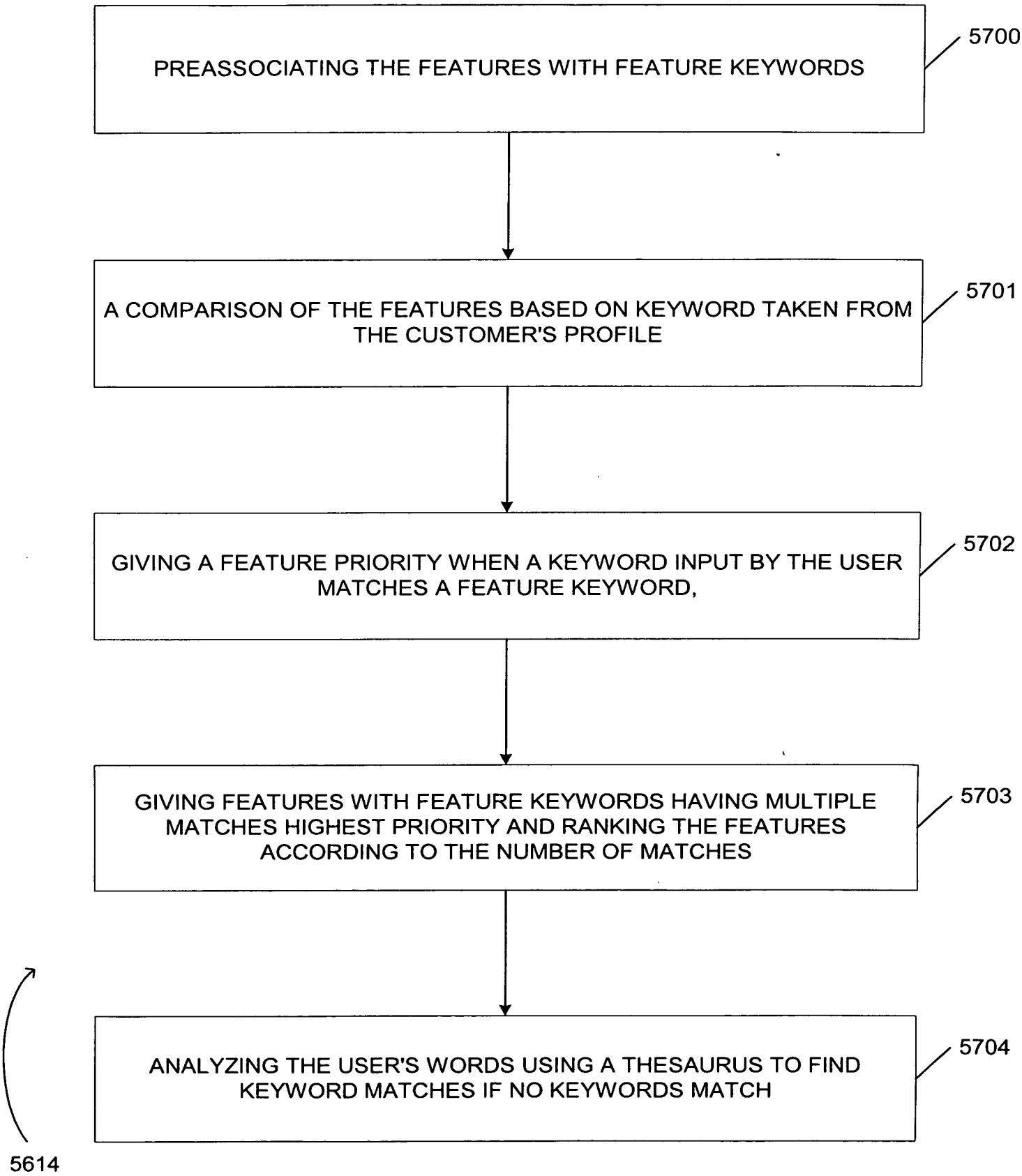

PREASSOCIATING THE FEATURES WITH FEATURE KEYWORDS
5700
A COMPARISON OF THE FEATURES BASED ON KEYWORD TAKEN FROM THE CUSTOMER'S PROFILE
5701
GIVING A FEATURE PRIORITY WHEN A KEYWORD INPUT BY THE USER MATCHES A FEATURE KEYWORD,
5702
GIVING FEATURES WITH FEATURE KEYWORDS HAVING MULTIPLE MATCHES HIGHEST PRIORITY AND RANKING THE FEATURES ACCORDING TO THE NUMBER OF MATCHES
5703
ANALYZING THE USER'S WORDS USING A THESAURUS TO FIND KEYWORD MATCHES IF NO KEYWORDS MATCH
5704
5614

Figure 57

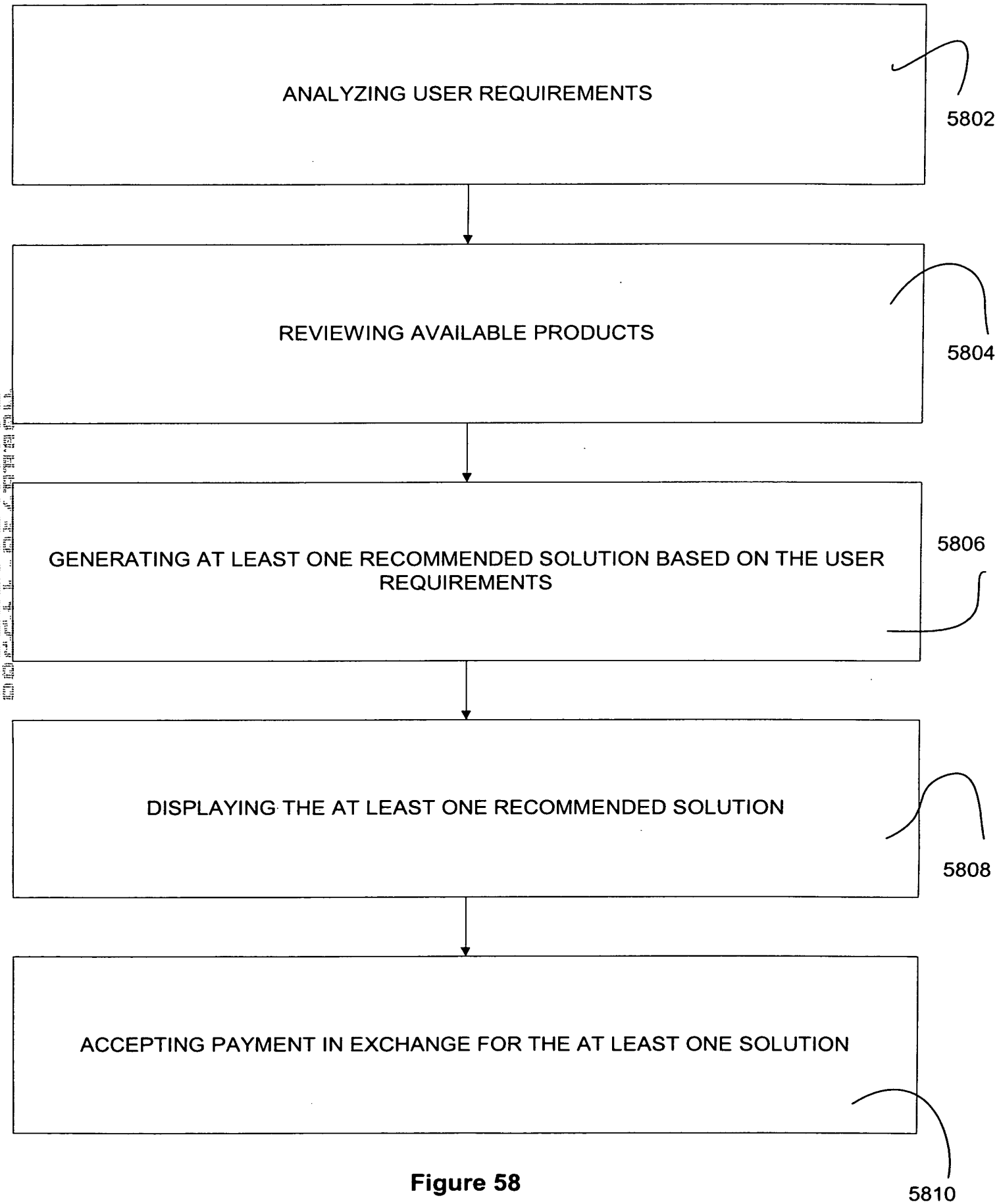

ANALYZING USER REQUIREMENTS
5802
REVIEWING AVAILABLE PRODUCTS
5804
GENERATING AT LEAST ONE RECOMMENDED SOLUTION BASED ON THE USER REQUIREMENTS
5806
DISPLAYING THE AT LEAST ONE RECOMMENDED SOLUTION
5808
ACCEPTING PAYMENT IN EXCHANGE FOR THE AT LEAST ONE SOLUTION
5810

Figure 58

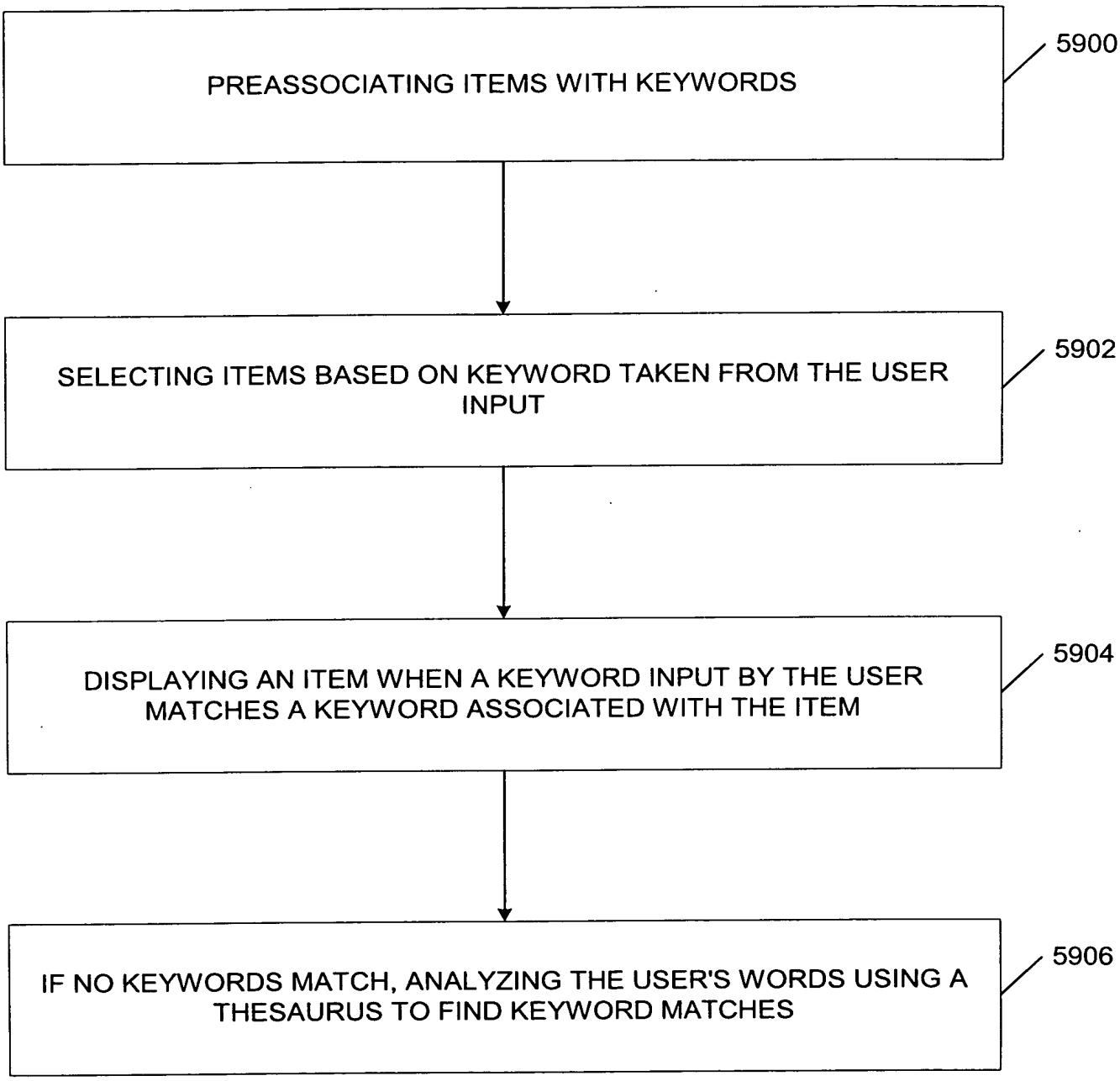

PREASSOCIATING ITEMS WITH KEYWORDS
5900
SELECTING ITEMS BASED ON KEYWORD TAKEN FROM THE USER INPUT
5902
DISPLAYING AN ITEM WHEN A KEYWORD INPUT BY THE USER MATCHES A KEYWORD ASSOCIATED WITH THE ITEM
5904
IF NO KEYWORDS MATCH, ANALYZING THE USER'S WORDS USING A THESAURUS TO FIND KEYWORD MATCHES
5906
5806

Figure 59

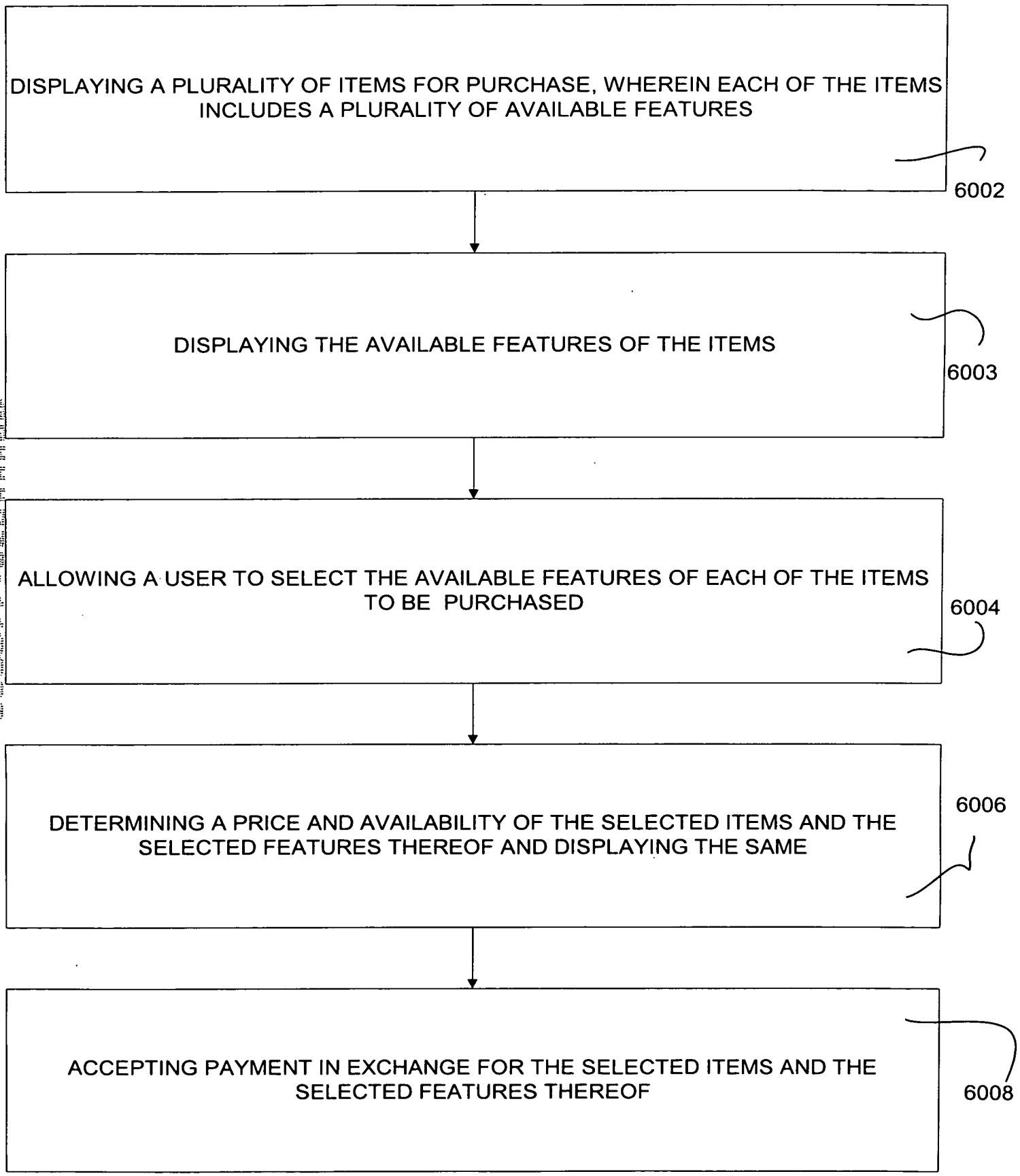

DISPLAYING A PLURALITY OF ITEMS FOR PURCHASE, WHEREIN EACH OF THE ITEMS INCLUDES A PLURALITY OF AVAILABLE FEATURES
6002
DISPLAYING THE AVAILABLE FEATURES OF THE ITEMS
6003
ALLOWING A USER TO SELECT THE AVAILABLE FEATURES OF EACH OF THE ITEMS TO BE PURCHASED
6004
DETERMINING A PRICE AND AVAILABILITY OF THE SELECTED ITEMS AND THE SELECTED FEATURES THEREOF AND DISPLAYING THE SAME
6006
ACCEPTING PAYMENT IN EXCHANGE FOR THE SELECTED ITEMS AND THE SELECTED FEATURES THEREOF
6008

Figure 60

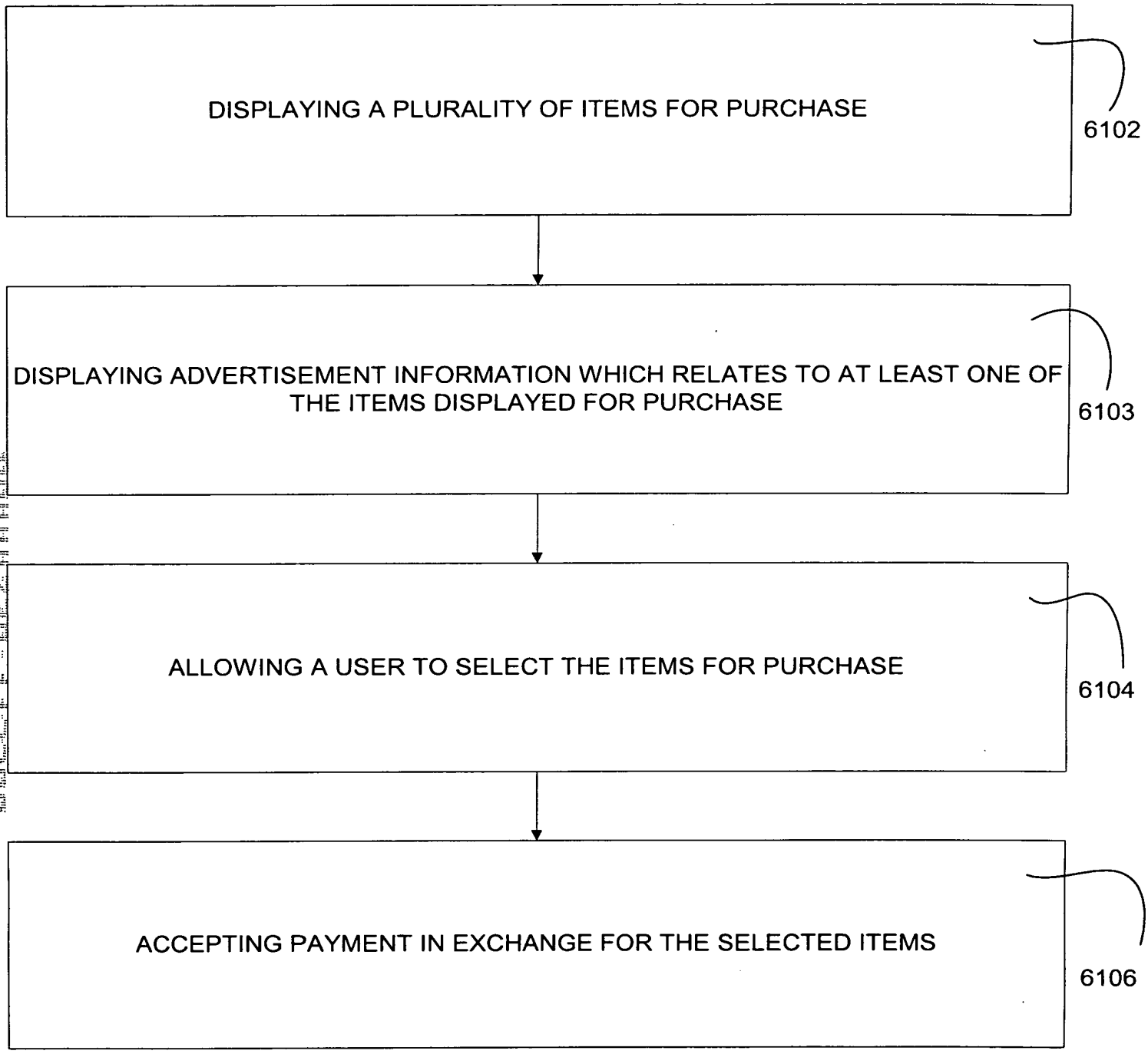

DISPLAYING A PLURALITY OF ITEMS FOR PURCHASE
6102
DISPLAYING ADVERTISEMENT INFORMATION WHICH RELATES TO AT LEAST ONE OF THE ITEMS DISPLAYED FOR PURCHASE
6103
ALLOWING A USER TO SELECT THE ITEMS FOR PURCHASE
6104
ACCEPTING PAYMENT IN EXCHANGE FOR THE SELECTED ITEMS
6106

Figure 61

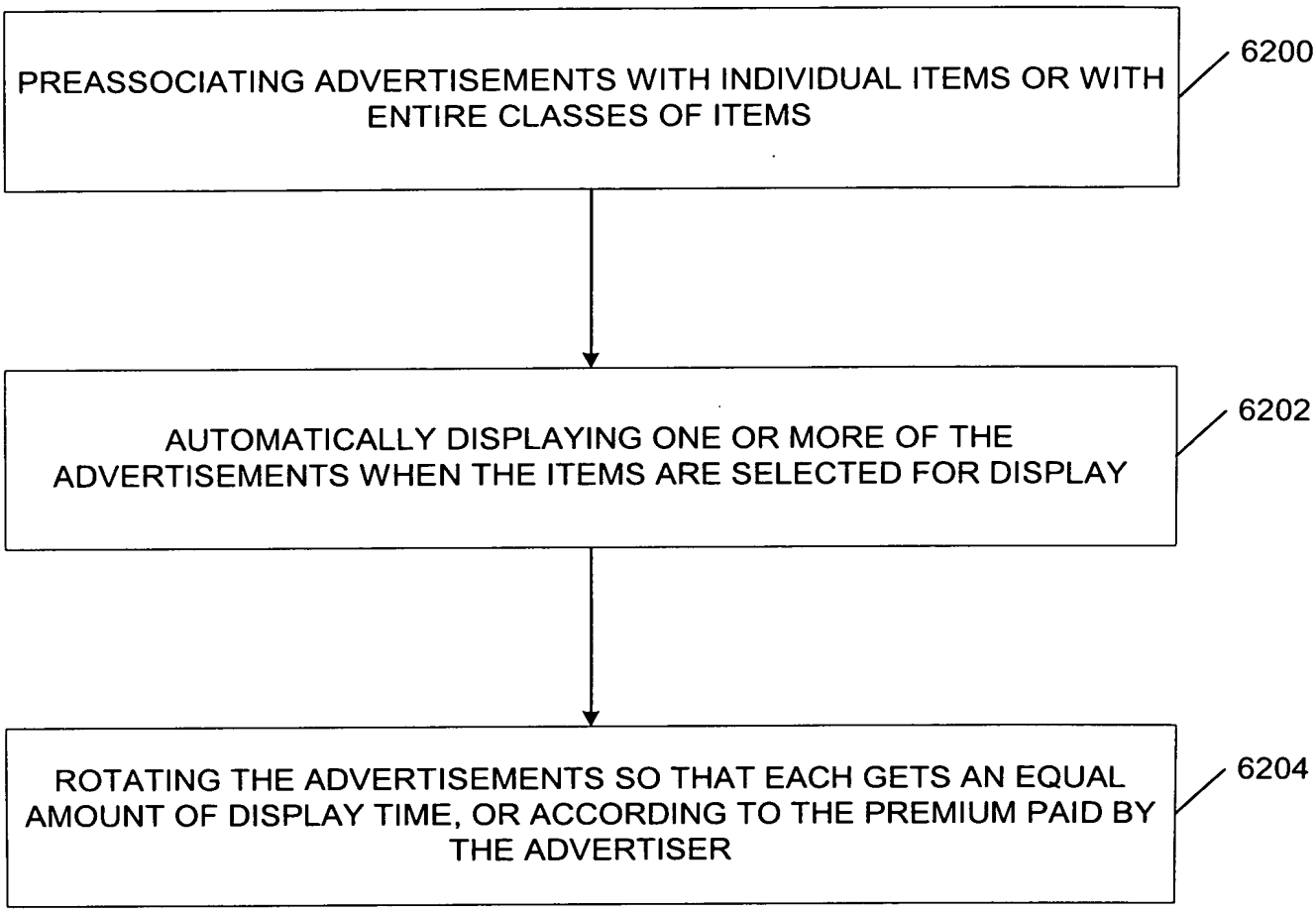

PREASSOCIATING ADVERTISEMENTS WITH INDIVIDUAL ITEMS OR WITH ENTIRE CLASSES OF ITEMS
6200
AUTOMATICALLY DISPLAYING ONE OR MORE OF THE ADVERTISEMENTS WHEN THE ITEMS ARE SELECTED FOR DISPLAY
6202
ROTATING THE ADVERTISEMENTS SO THAT EACH GETS AN EQUAL AMOUNT OF DISPLAY TIME, OR ACCORDING TO THE PREMIUM PAID BY THE ADVERTISER
6204
6103

Figure 62

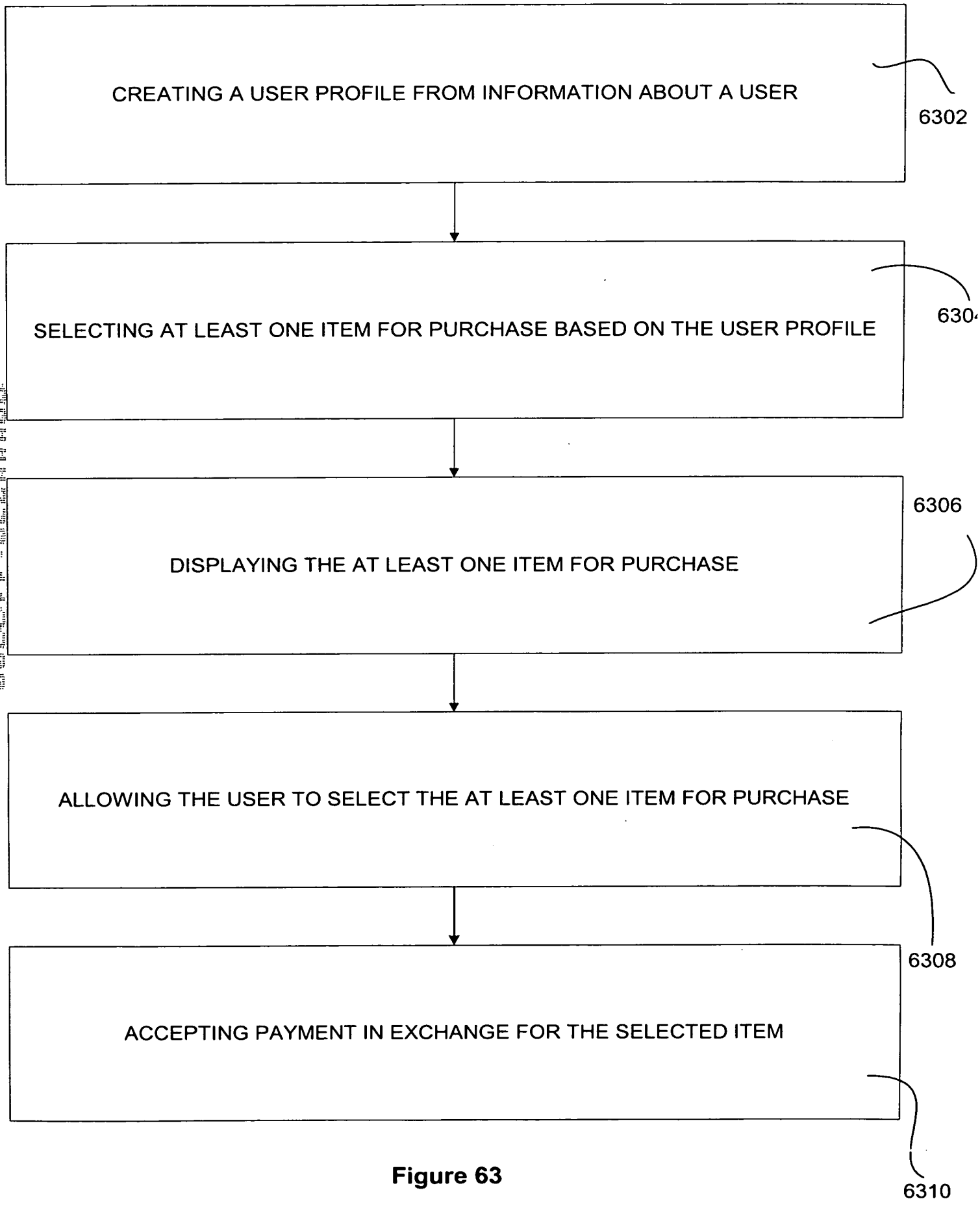

CREATING A USER PROFILE FROM INFORMATION ABOUT A USER
6302
SELECTING AT LEAST ONE ITEM FOR PURCHASE BASED ON THE USER PROFILE
630
DISPLAYING THE AT LEAST ONE ITEM FOR PURCHASE
6306
ALLOWING THE USER TO SELECT THE AT LEAST ONE ITEM FOR PURCHASE
6308
ACCEPTING PAYMENT IN EXCHANGE FOR THE SELECTED ITEM
6310

Figure 63

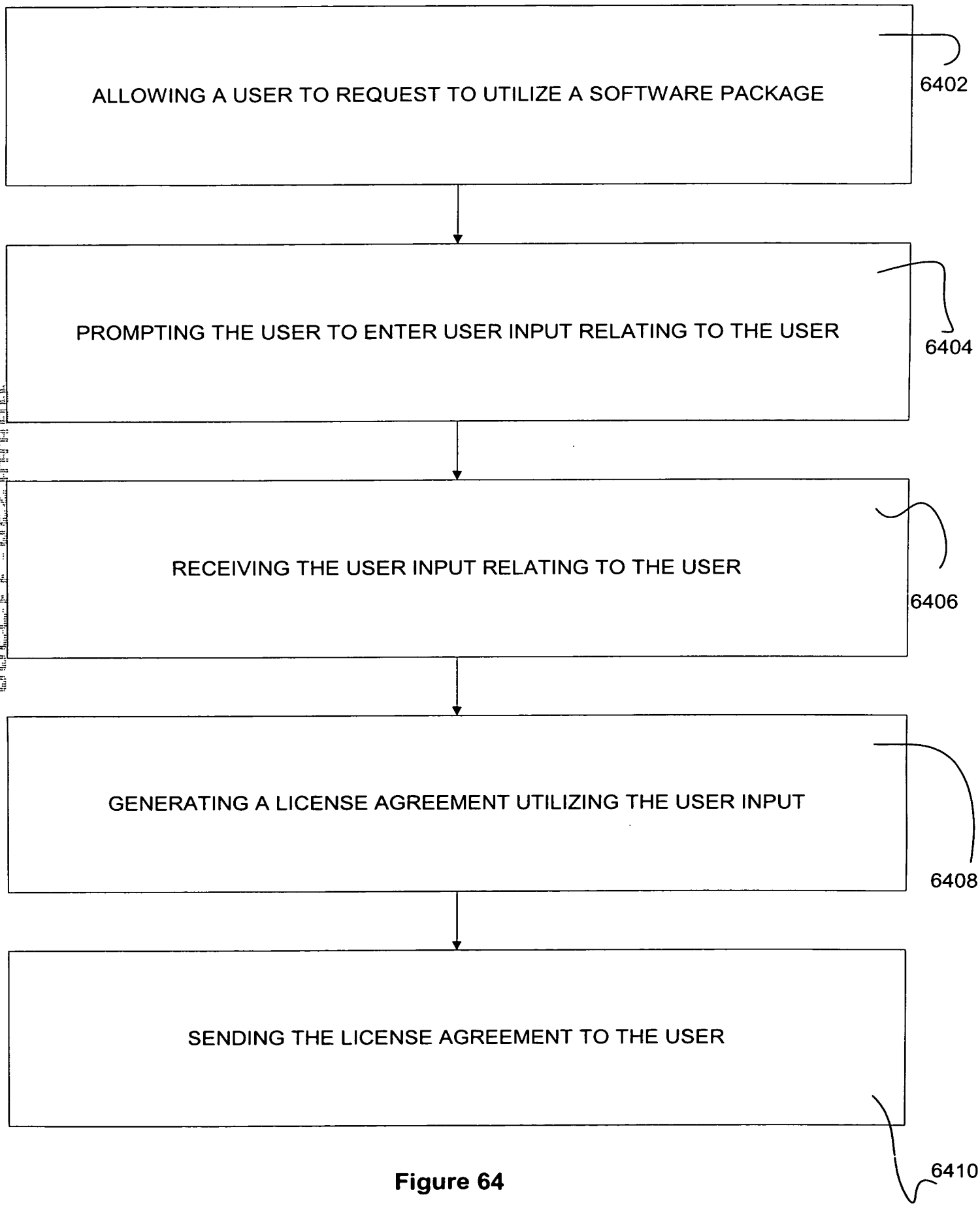

ALLOWING A USER TO REQUEST TO UTILIZE A SOFTWARE PACKAGE
6402
PROMPTING THE USER TO ENTER USER INPUT RELATING TO THE USER
6404
RECEIVING THE USER INPUT RELATING TO THE USER
6406
GENERATING A LICENSE AGREEMENT UTILIZING THE USER INPUT
6408
SENDING THE LICENSE AGREEMENT TO THE USER
6410

Figure 64

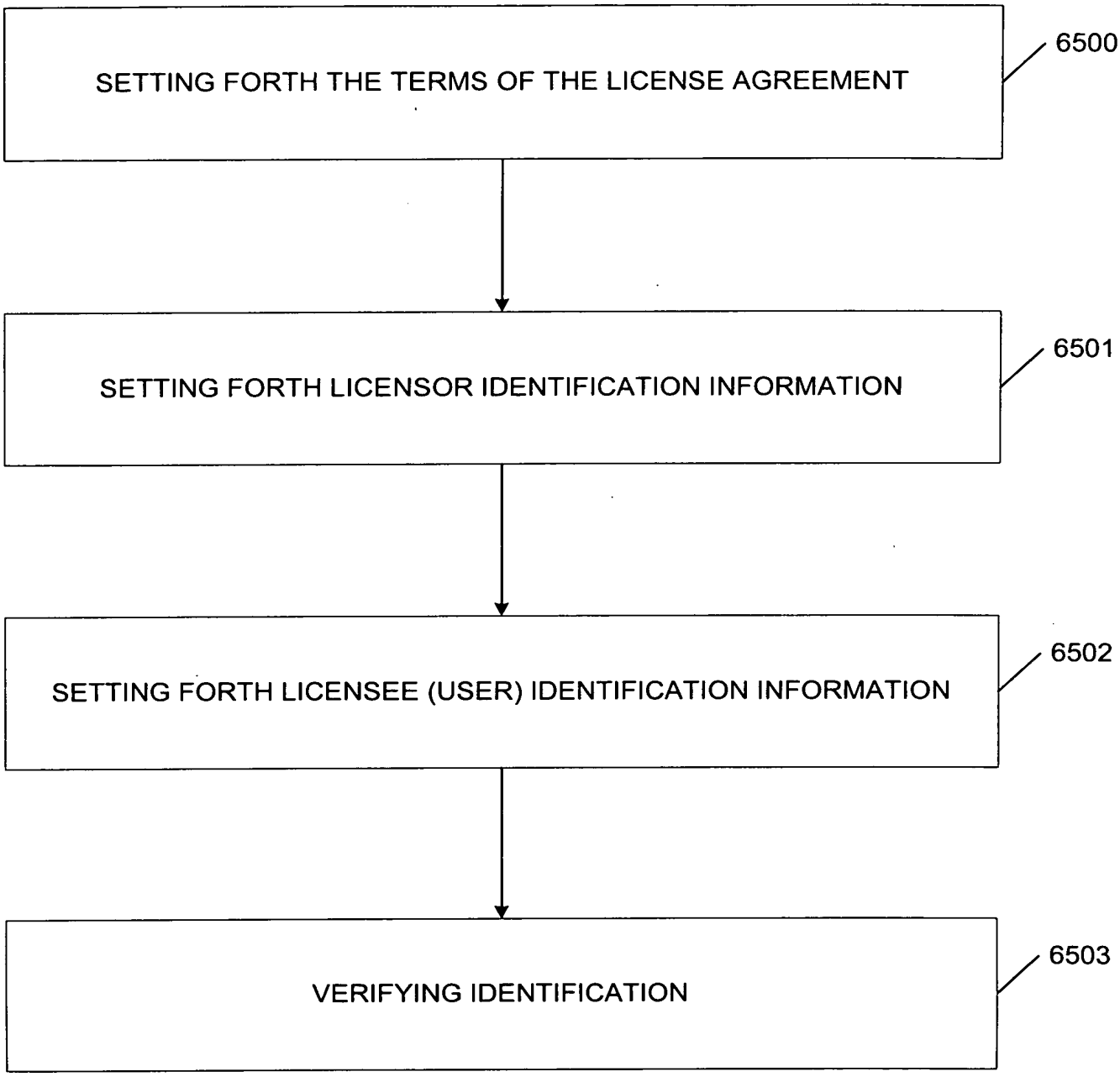

SETTING FORTH THE TERMS OF THE LICENSE AGREEMENT
6500
SETTING FORTH LICENSOR IDENTIFICATION INFORMATION
6501
SETTING FORTH LICENSEE (USER) IDENTIFICATION INFORMATION
6502
VERIFYING IDENTIFICATION
6503
6408

Figure 65

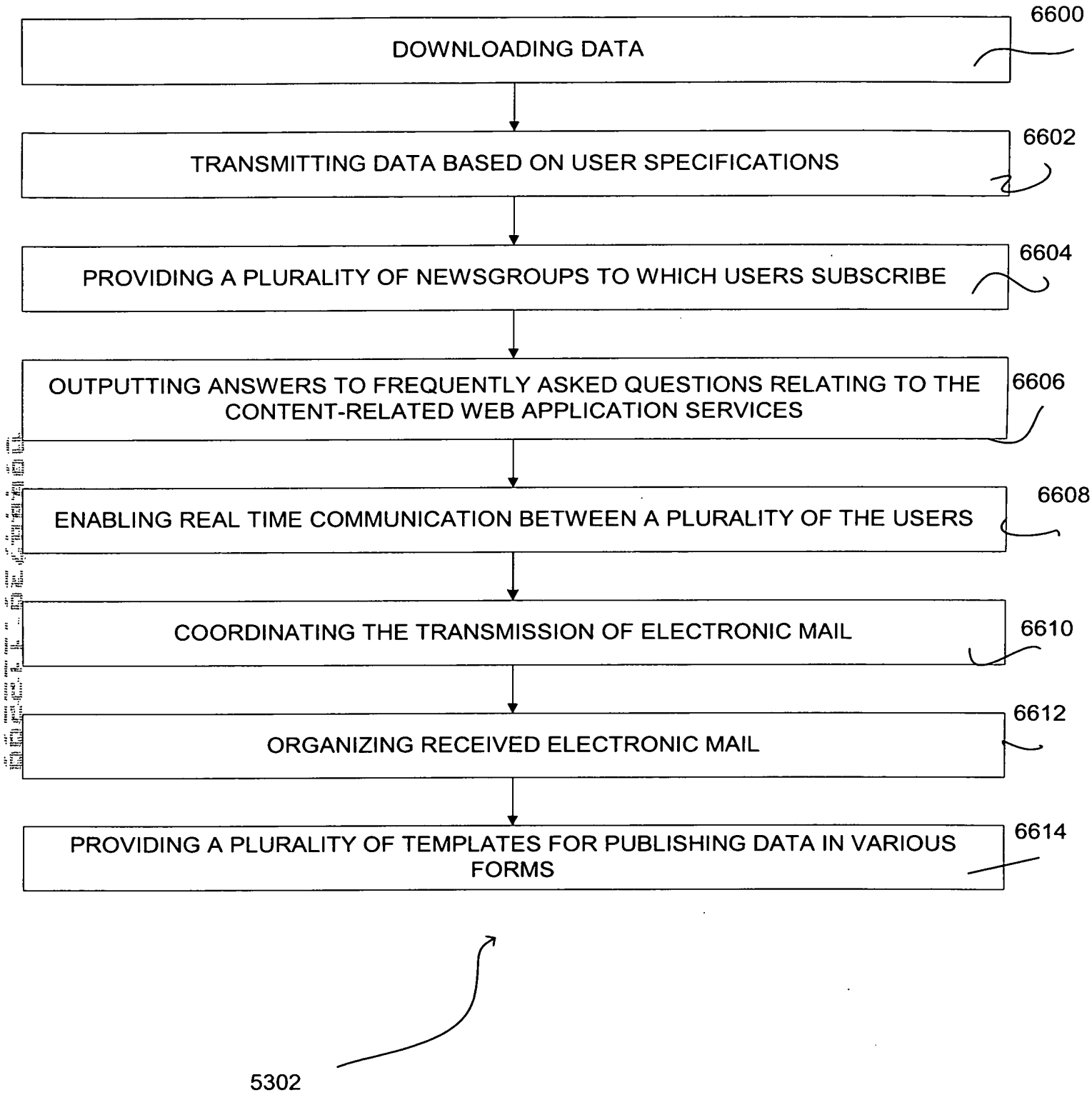

DOWNLOADING DATA
6600
TRANSMITTING DATA BASED ON USER SPECIFICATIONS
6602
PROVIDING A PLURALITY OF NEWSGROUPS TO WHICH USERS SUBSCRIBE
6604
OUTPUTTING ANSWERS TO FREQUENTLY ASKED QUESTIONS RELATING TO THE CONTENT-RELATED WEB APPLICATION SERVICES
6606
ENABLING REAL TIME COMMUNICATION BETWEEN A PLURALITY OF THE USERS
6608
COORDINATING THE TRANSMISSION OF ELECTRONIC MAIL
6610
ORGANIZING RECEIVED ELECTRONIC MAIL
6612
PROVIDING A PLURALITY OF TEMPLATES FOR PUBLISHING DATA IN VARIOUS FORMS
6614
5302

Figure 66

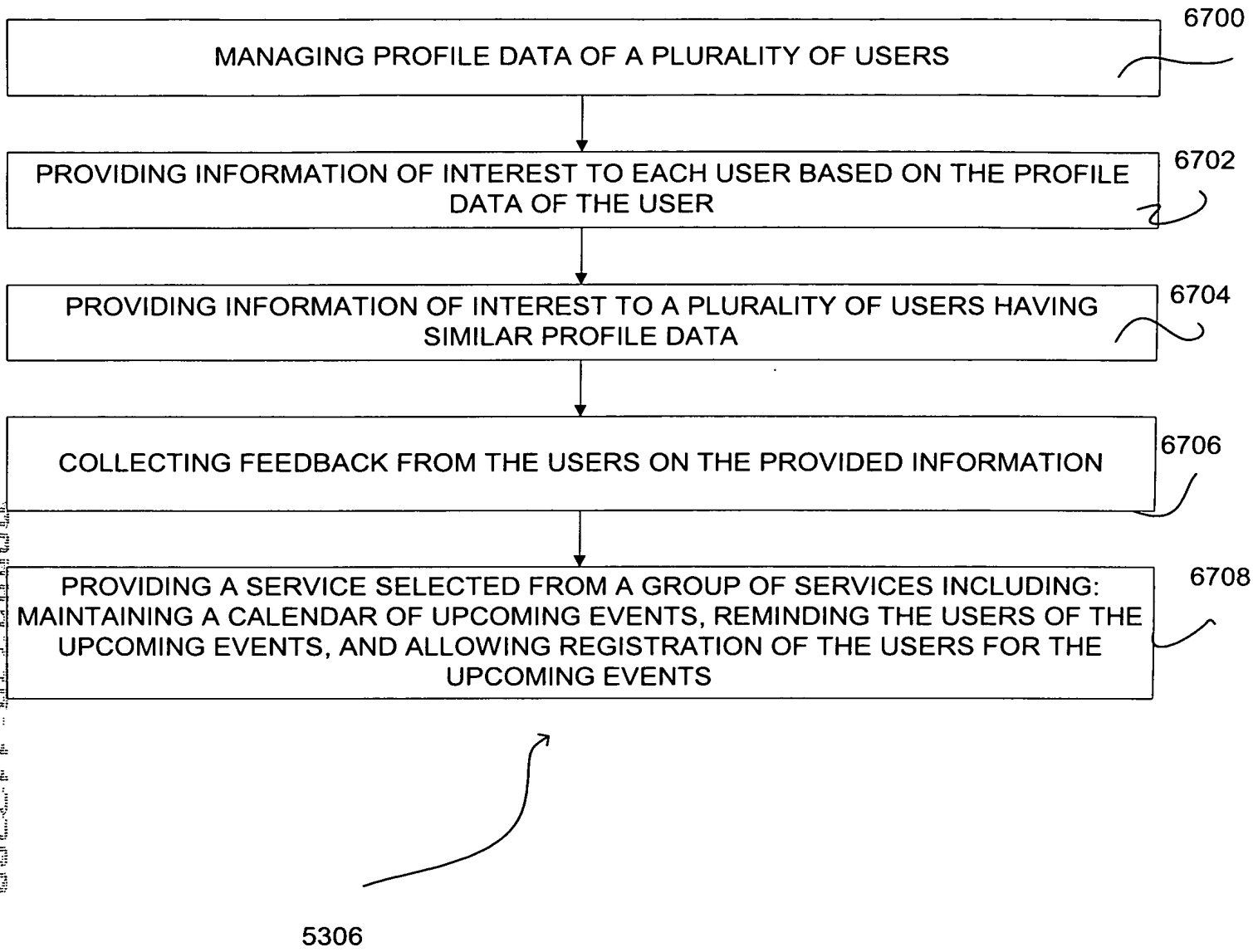

6700
MANAGING PROFILE DATA OF A PLURALITY OF USERS
6702
PROVIDING INFORMATION OF INTEREST TO EACH USER BASED ON THE PROFILE DATA OF THE USER
6704
PROVIDING INFORMATION OF INTEREST TO A PLURALITY OF USERS HAVING SIMILAR PROFILE DATA
6706
COLLECTING FEEDBACK FROM THE USERS ON THE PROVIDED INFORMATION
6708
PROVIDING A SERVICE SELECTED FROM A GROUP OF SERVICES INCLUDING: MAINTAINING A CALENDAR OF UPCOMING EVENTS, REMINDING THE USERS OF THE UPCOMING EVENTS, AND ALLOWING REGISTRATION OF THE USERS FOR THE UPCOMING EVENTS
5306

Figure 67

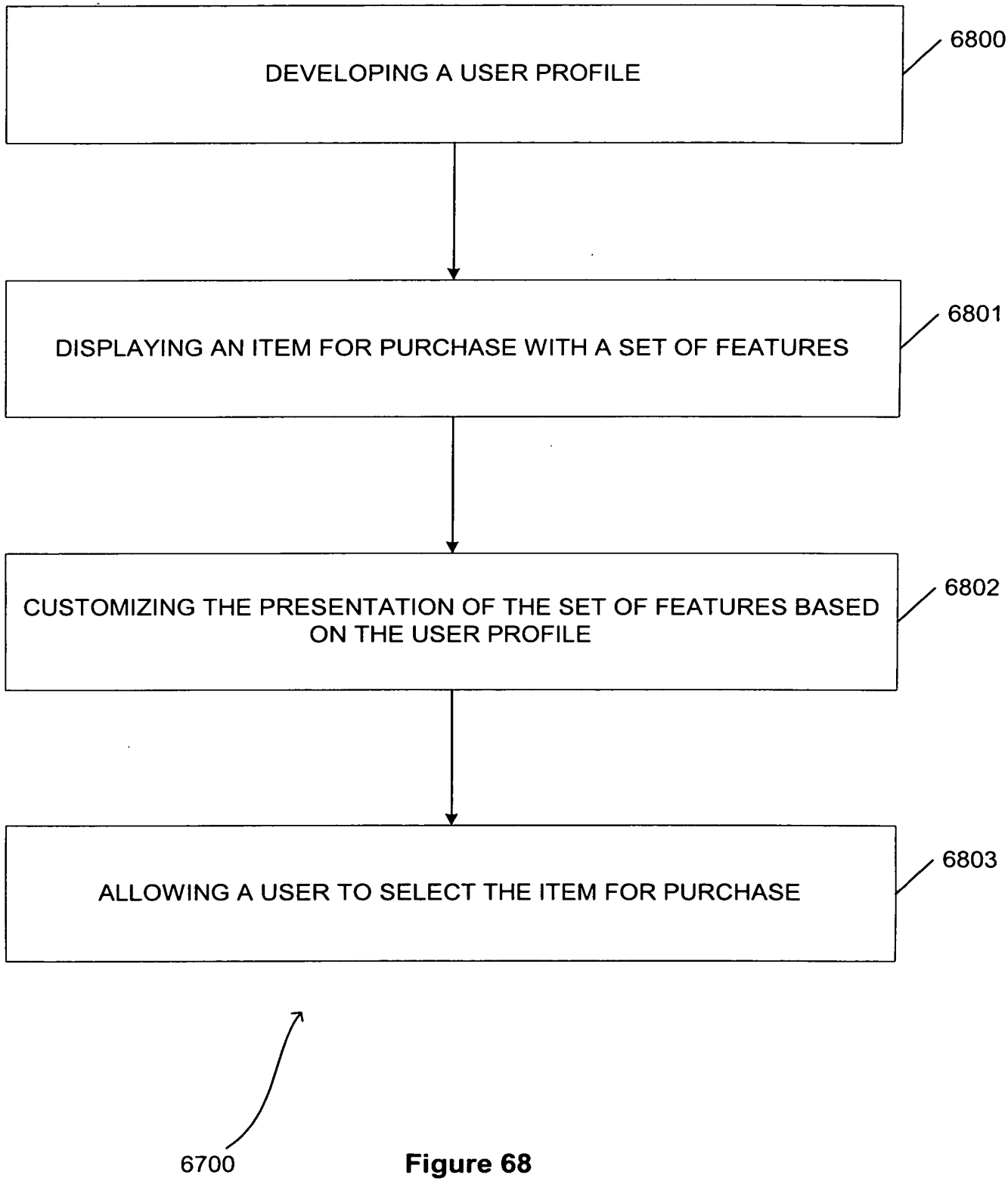

DEVELOPING A USER PROFILE
6800
DISPLAYING AN ITEM FOR PURCHASE WITH A SET OF FEATURES
6801
CUSTOMIZING THE PRESENTATION OF THE SET OF FEATURES BASED ON THE USER PROFILE
6802
ALLOWING A USER TO SELECT THE ITEM FOR PURCHASE
6803
6700

Figure 68

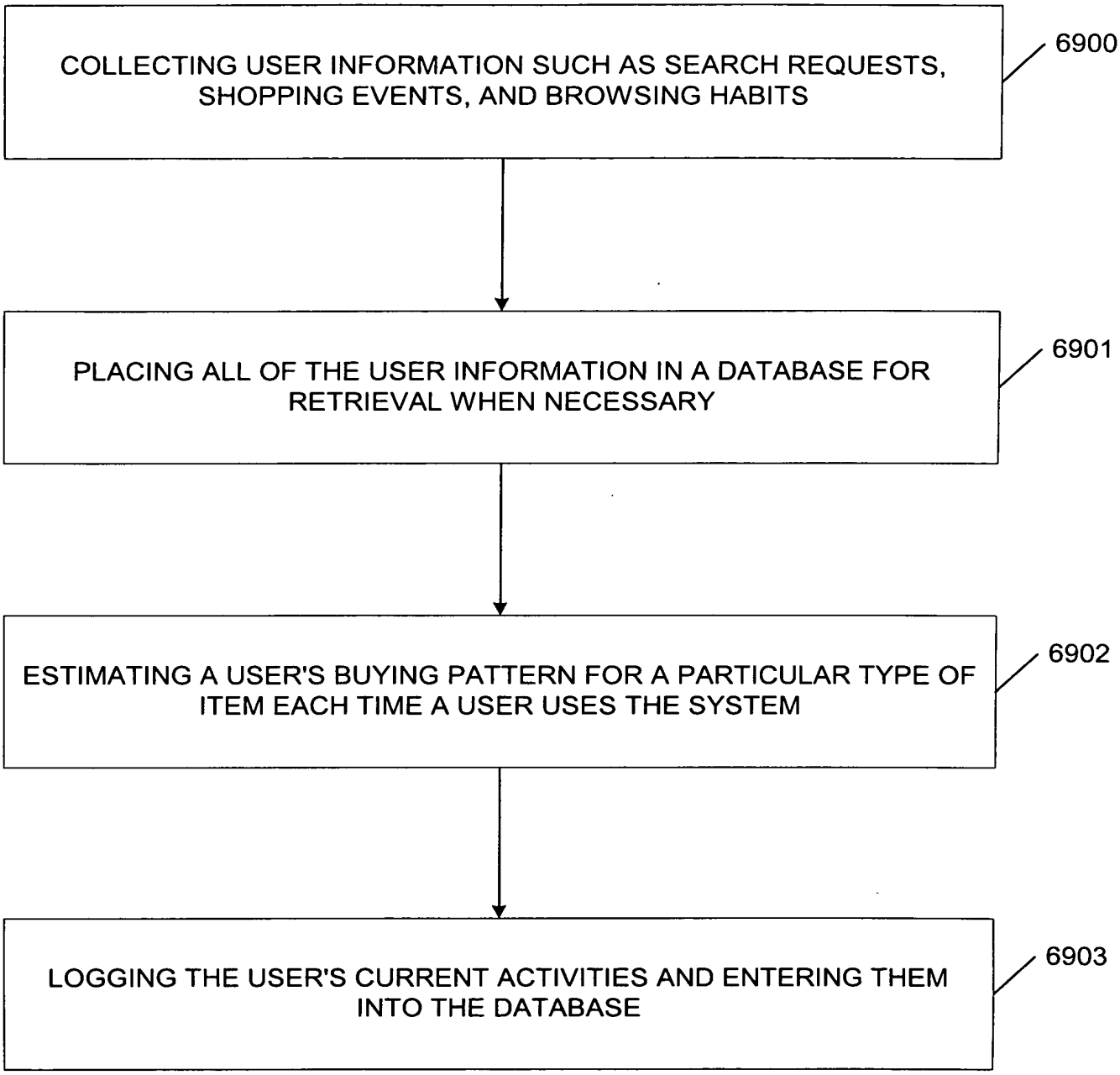

COLLECTING USER INFORMATION SUCH AS SEARCH REQUESTS, SHOPPING EVENTS, AND BROWSING HABITS
6900
PLACING ALL OF THE USER INFORMATION IN A DATABASE FOR RETRIEVAL WHEN NECESSARY
6901
ESTIMATING A USER'S BUYING PATTERN FOR A PARTICULAR TYPE OF ITEM EACH TIME A USER USES THE SYSTEM
6902
LOGGING THE USER'S CURRENT ACTIVITIES AND ENTERING THEM INTO THE DATABASE
6903
6810

Figure 69

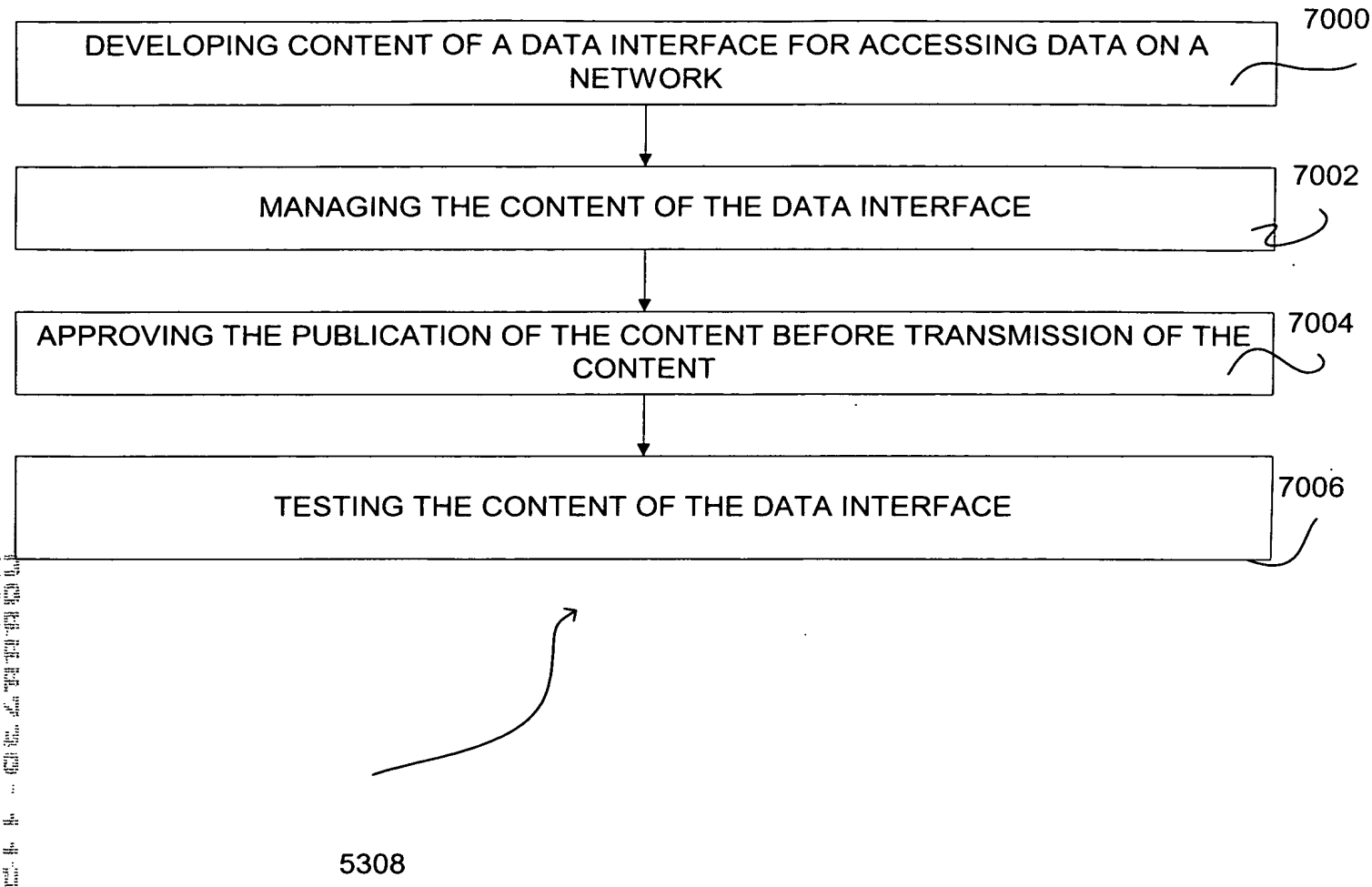

DEVELOPING CONTENT OF A DATA INTERFACE FOR ACCESSING DATA ON A NETWORK
7000
MANAGING THE CONTENT OF THE DATA INTERFACE
7002
APPROVING THE PUBLICATION OF THE CONTENT BEFORE TRANSMISSION OF THE CONTENT
7004
TESTING THE CONTENT OF THE DATA INTERFACE
7006
5308

Figure 70

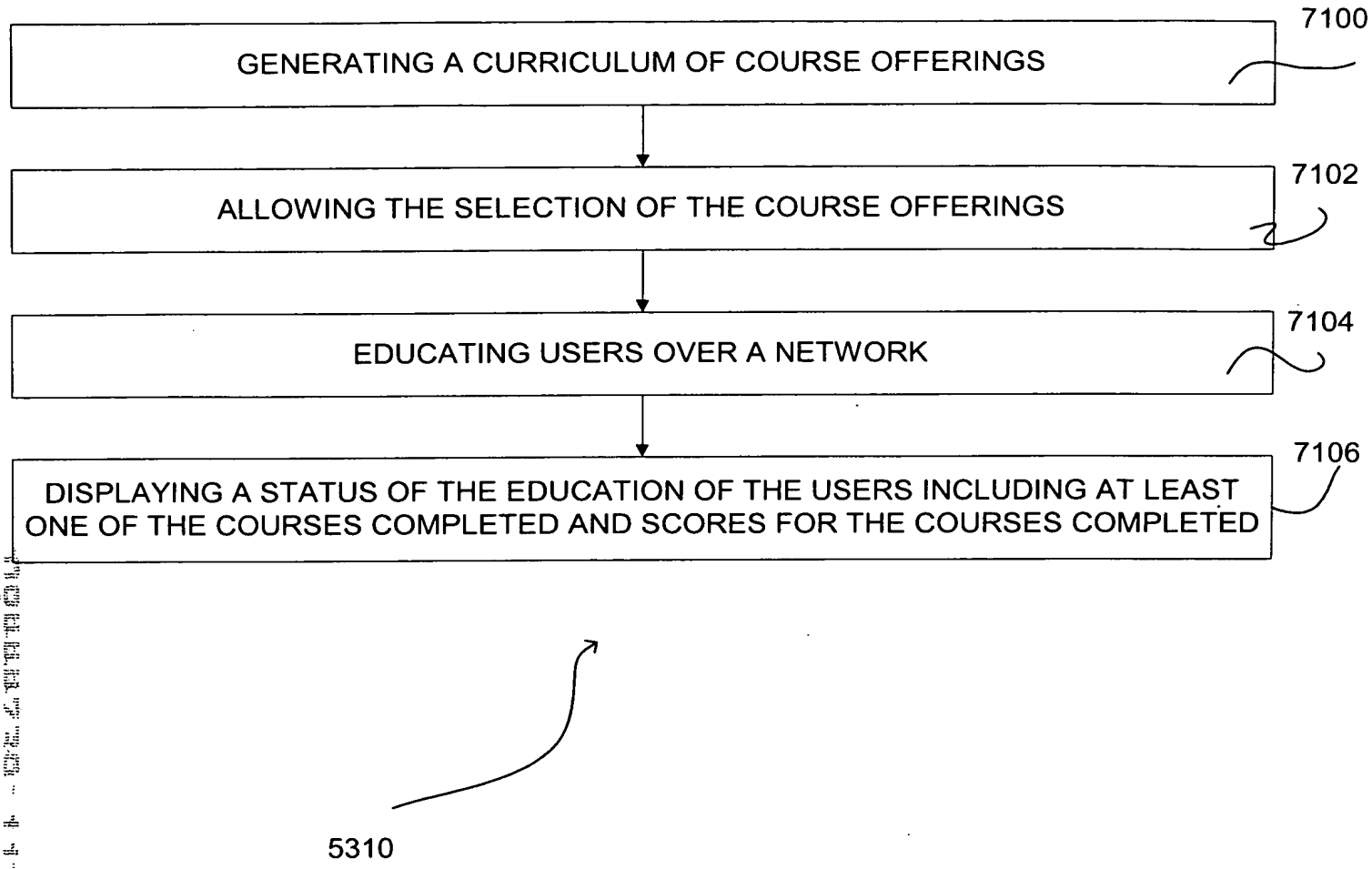

GENERATING A CURRICULUM OF COURSE OFFERINGS
7100
ALLOWING THE SELECTION OF THE COURSE OFFERINGS
7102
EDUCATING USERS OVER A NETWORK
7104
DISPLAYING A STATUS OF THE EDUCATION OF THE USERS INCLUDING AT LEAST ONE OF THE COURSES COMPLETED AND SCORES FOR THE COURSES COMPLETED
7106
5310

Figure 71

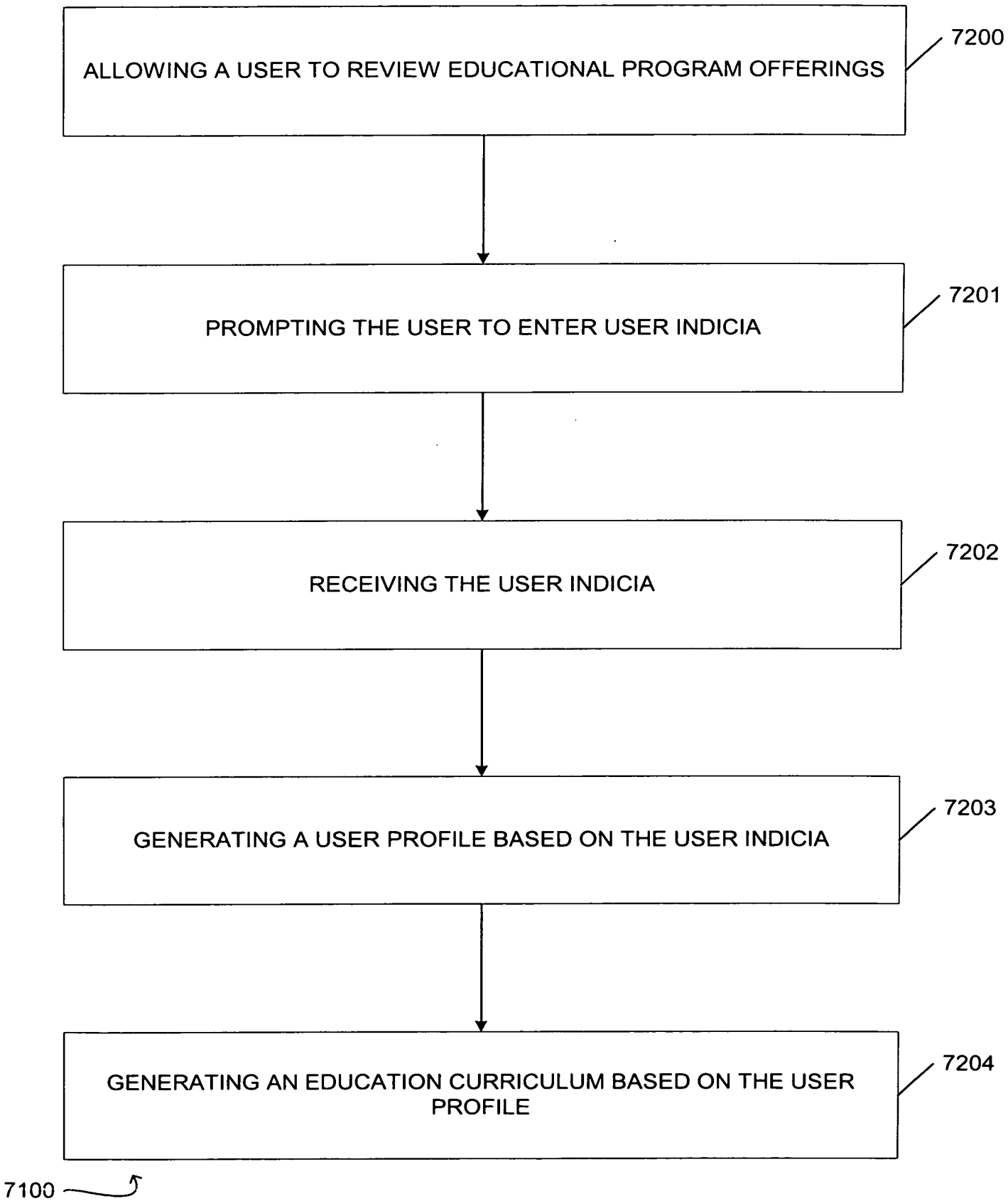

ALLOWING A USER TO REVIEW EDUCATIONAL PROGRAM OFFERINGS
7200
PROMPTING THE USER TO ENTER USER INDICIA
7201
RECEIVING THE USER INDICIA
7202
GENERATING A USER PROFILE BASED ON THE USER INDICIA
7203
GENERATING AN EDUCATION CURRICULUM BASED ON THE USER PROFILE
7204
7100

Figure 72

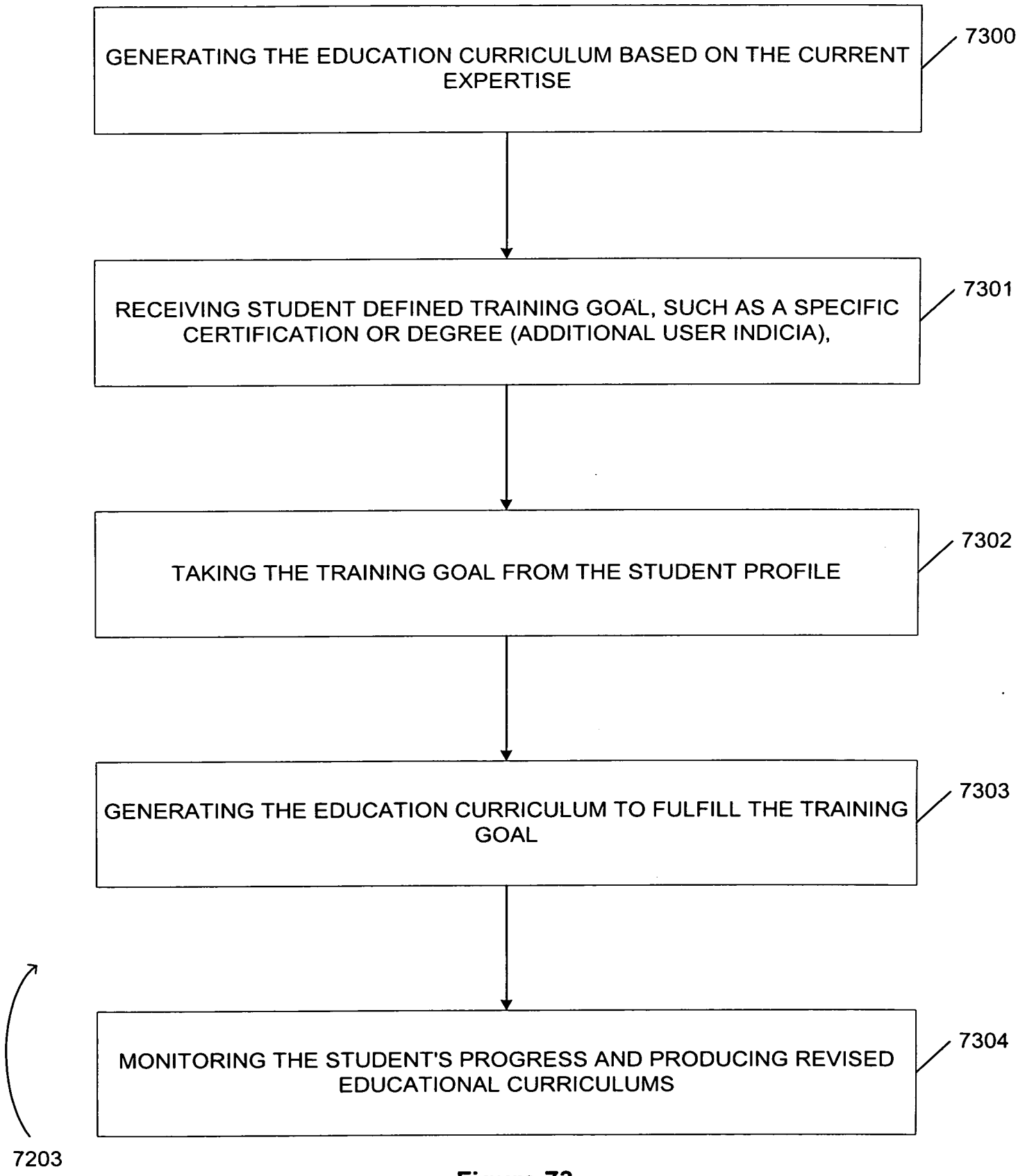

GENERATING THE EDUCATION CURRICULUM BASED ON THE CURRENT EXPERTISE
7300
RECEIVING STUDENT DEFINED TRAINING GOAL, SUCH AS A SPECIFIC CERTIFICATION OR DEGREE (ADDITIONAL USER INDICIA),
7301
TAKING THE TRAINING GOAL FROM THE STUDENT PROFILE
7302
GENERATING THE EDUCATION CURRICULUM TO FULFILL THE TRAINING GOAL
7303
MONITORING THE STUDENT'S PROGRESS AND PRODUCING REVISED EDUCATIONAL CURRICULUMS
7304
7203

Figure 73

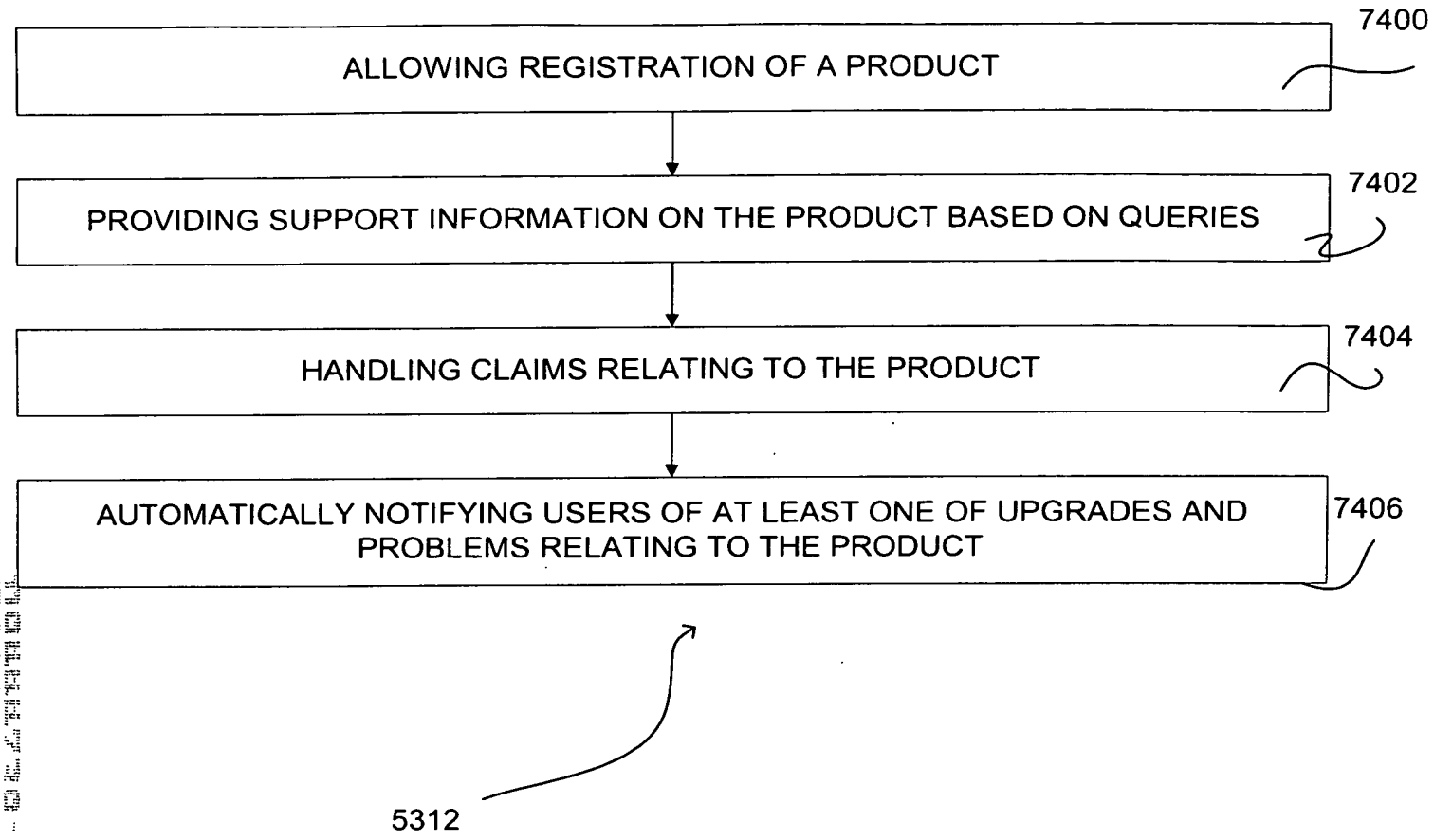
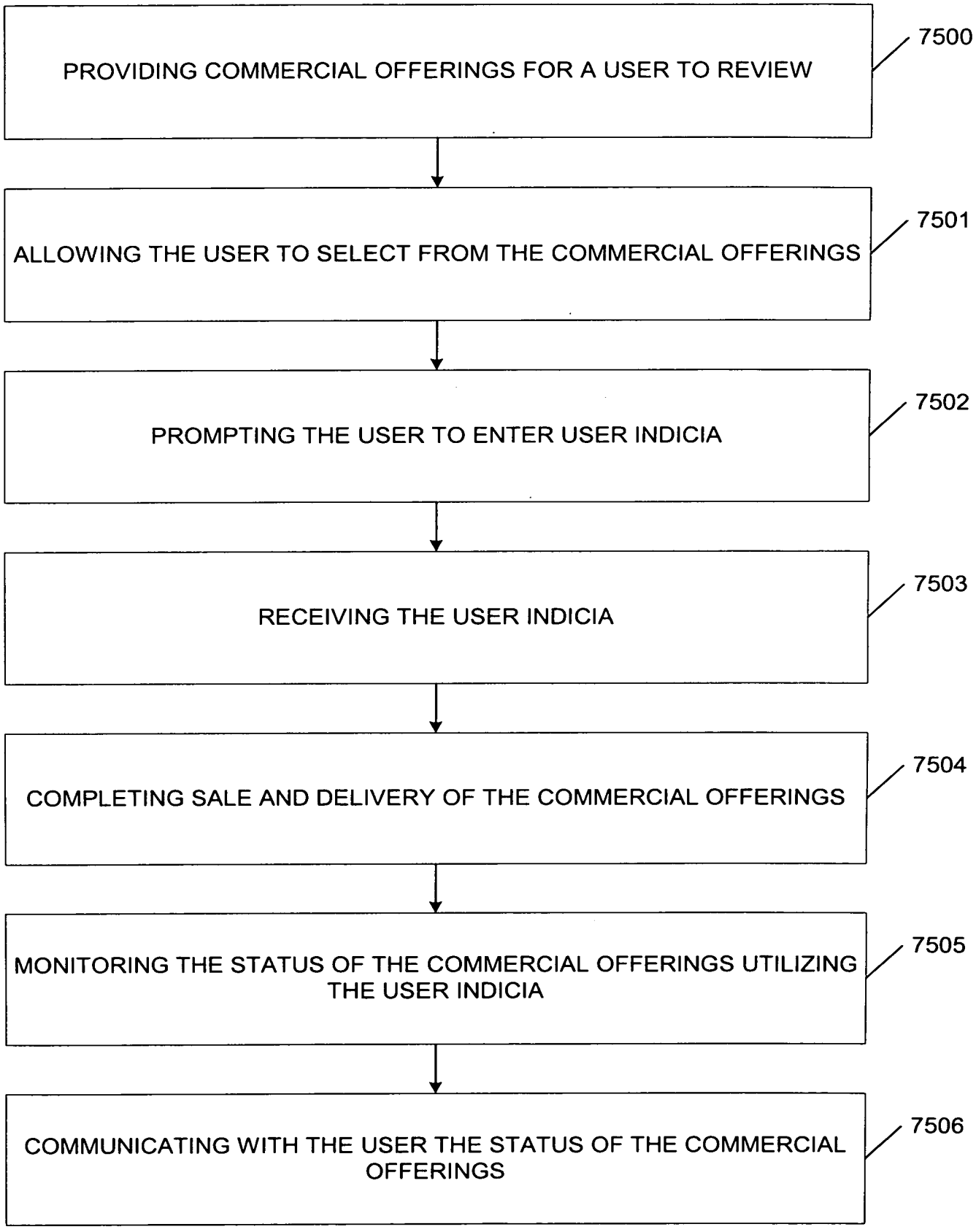

ALLOWING REGISTRATION OF A PRODUCT
7400
PROVIDING SUPPORT INFORMATION ON THE PRODUCT BASED ON QUERIES
7402
HANDLING CLAIMS RELATING TO THE PRODUCT
7404
AUTOMATICALLY NOTIFYING USERS OF AT LEAST ONE OF UPGRADES AND PROBLEMS RELATING TO THE PRODUCT
7406
5312

Figure 74



7406

Figure 75

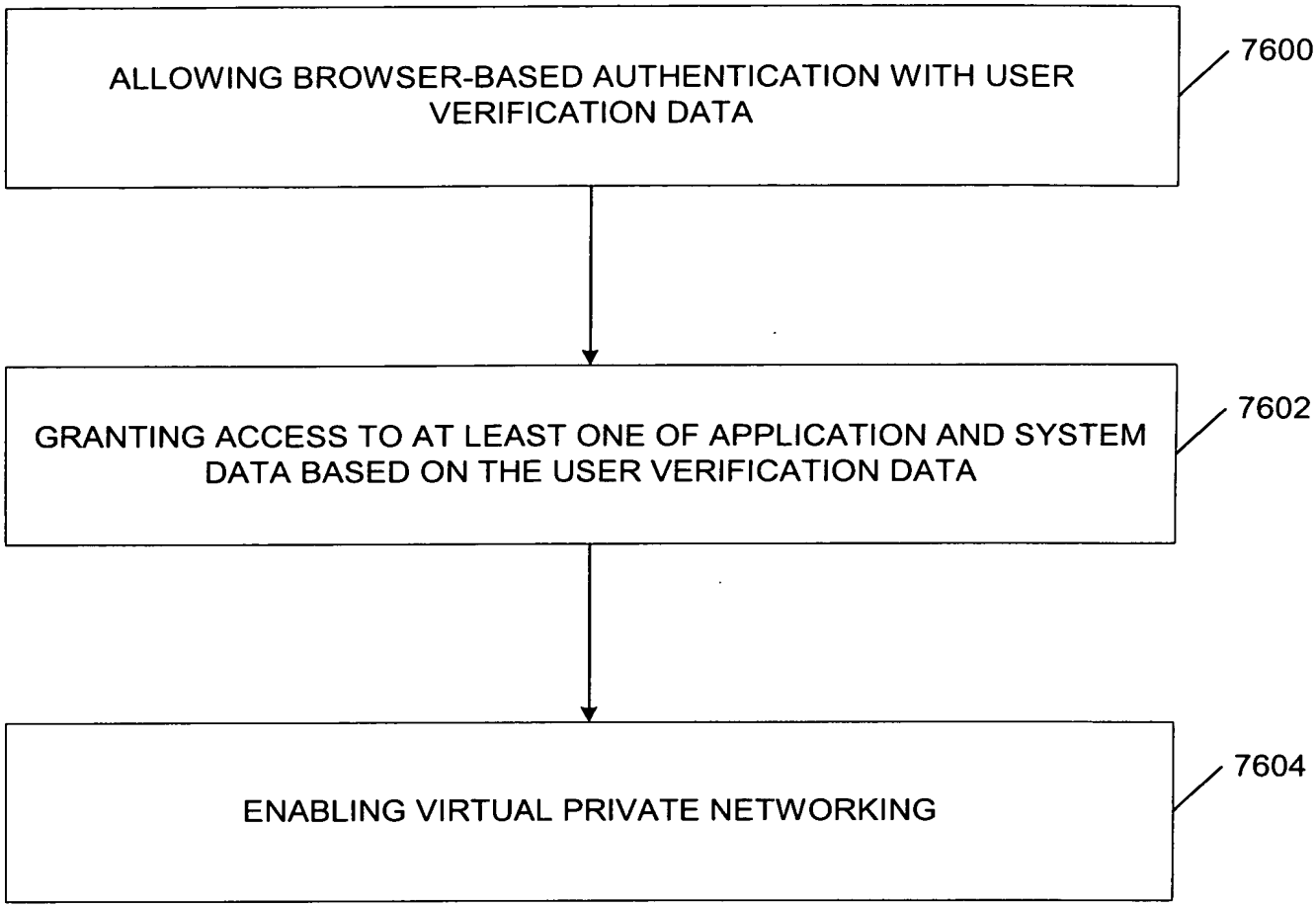

ALLOWING BROWSER-BASED AUTHENTICATION WITH USER VERIFICATION DATA
7600
GRANTING ACCESS TO AT LEAST ONE OF APPLICATION AND SYSTEM DATA BASED ON THE USER VERIFICATION DATA
7602
ENABLING VIRTUAL PRIVATE NETWORKING
7604
5314

Figure 76

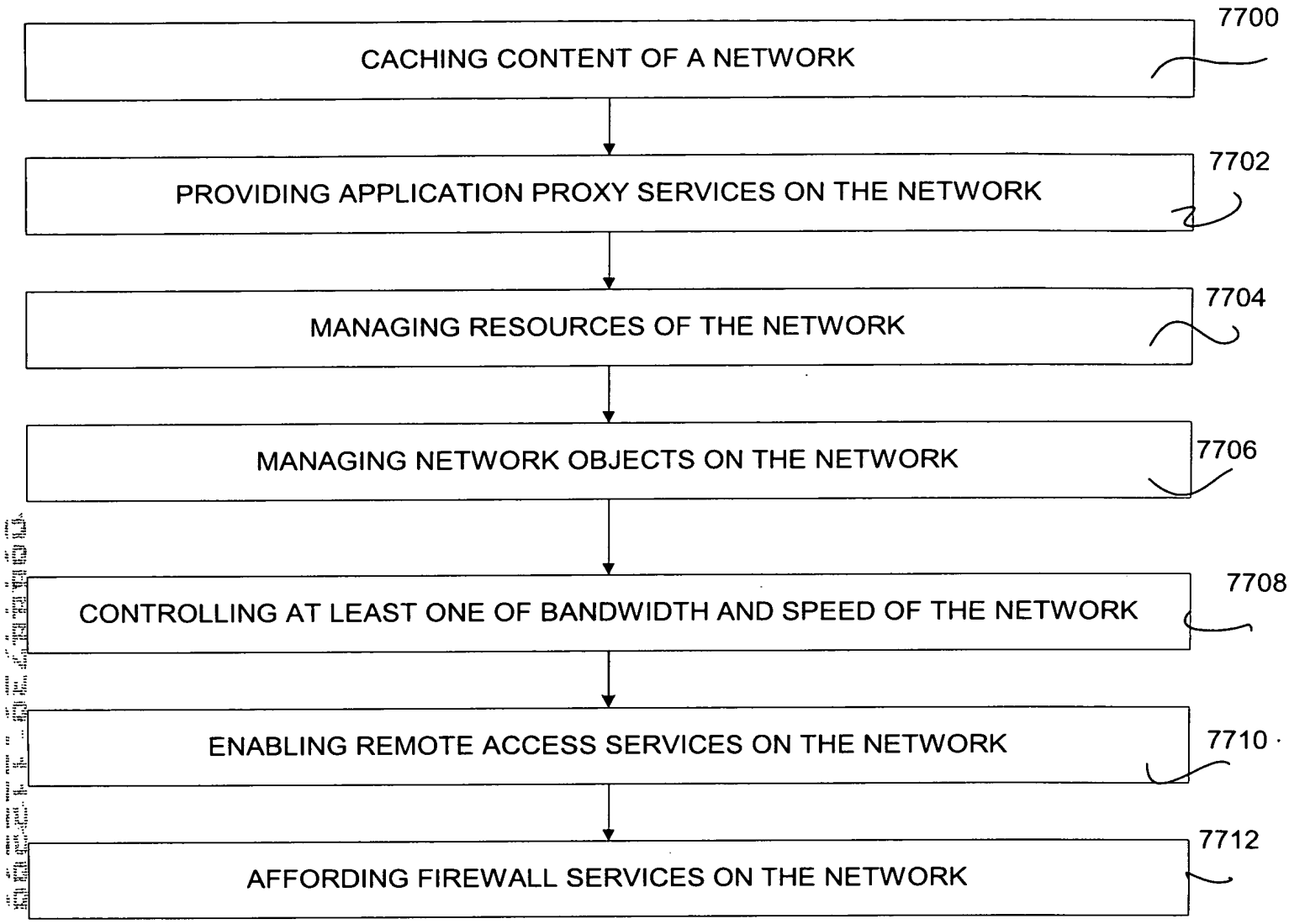


Figure 77

5316

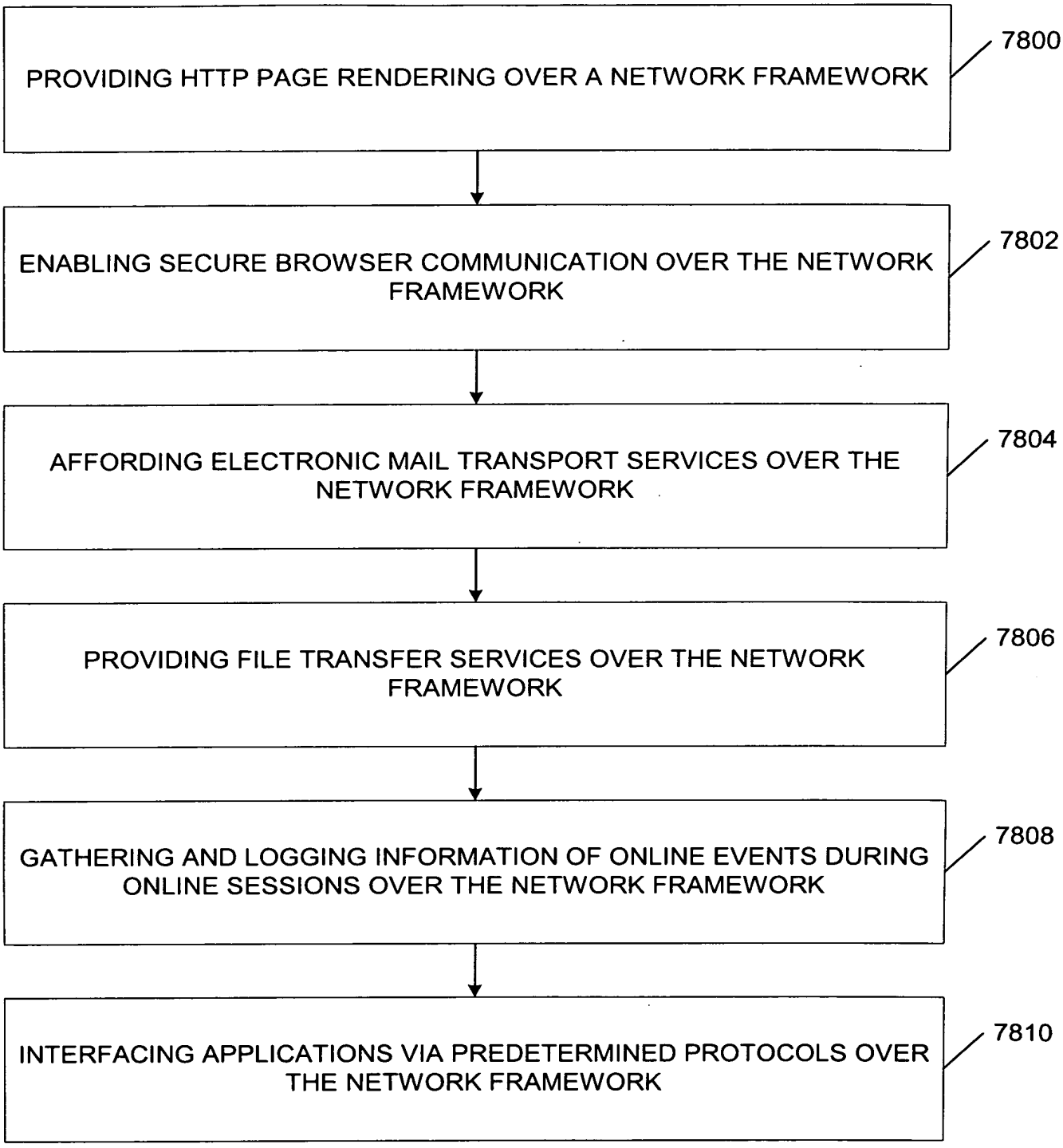

PROVIDING HTTP PAGE RENDERING OVER A NETWORK FRAMEWORK
7800
ENABLING SECURE BROWSER COMMUNICATION OVER THE NETWORK FRAMEWORK
7802
AFFORDING ELECTRONIC MAIL TRANSPORT SERVICES OVER THE NETWORK FRAMEWORK
7804
PROVIDING FILE TRANSFER SERVICES OVER THE NETWORK FRAMEWORK
7806
GATHERING AND LOGGING INFORMATION OF ONLINE EVENTS DURING ONLINE SESSIONS OVER THE NETWORK FRAMEWORK
7808
INTERFACING APPLICATIONS VIA PREDETERMINED PROTOCOLS OVER THE NETWORK FRAMEWORK
7810
5318

Figure 78

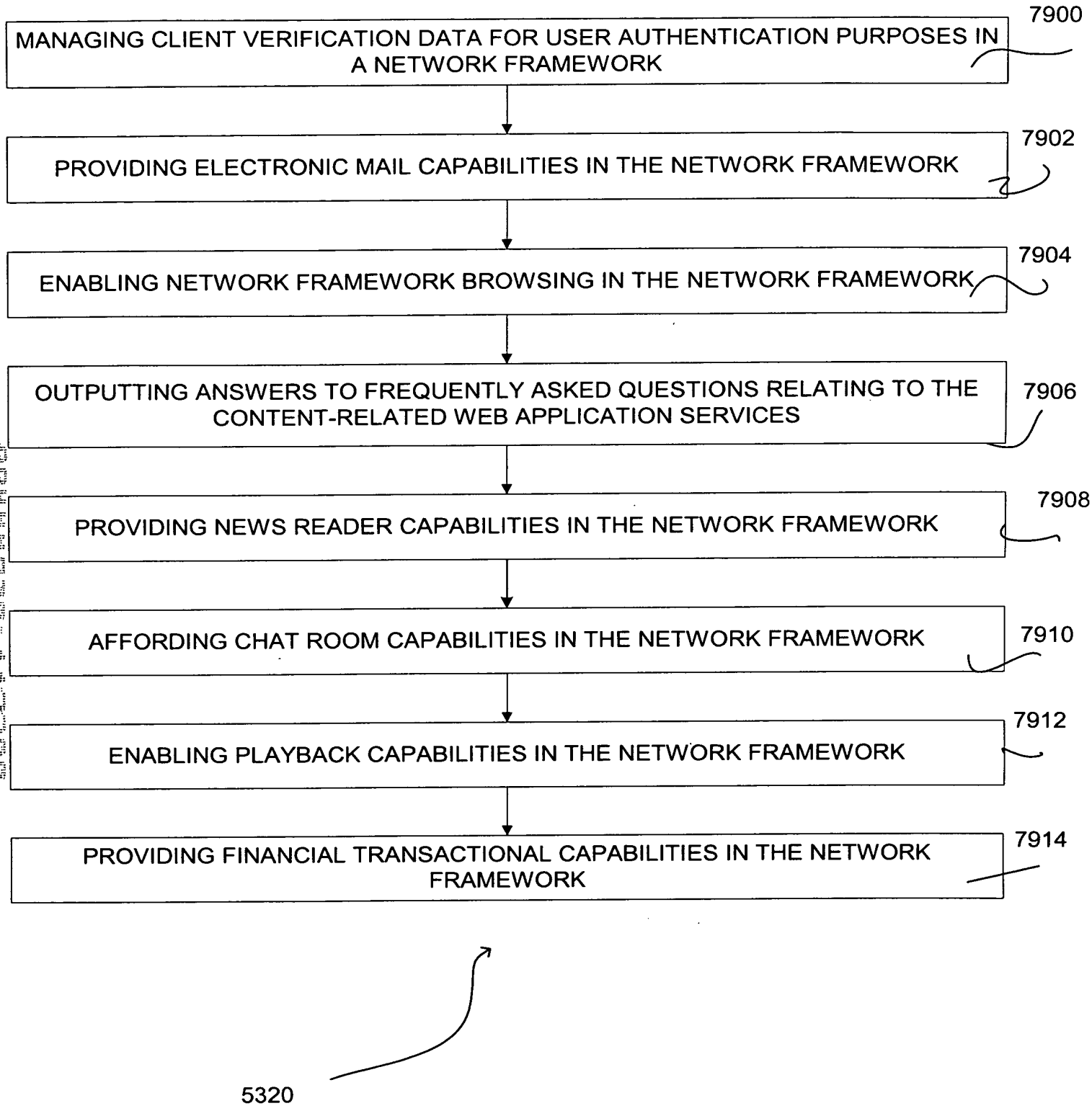

MANAGING CLIENT VERIFICATION DATA FOR USER AUTHENTICATION PURPOSES IN A NETWORK FRAMEWORK
7900
PROVIDING ELECTRONIC MAIL CAPABILITIES IN THE NETWORK FRAMEWORK
7902
ENABLING NETWORK FRAMEWORK BROWSING IN THE NETWORK FRAMEWORK
7904
OUTPUTTING ANSWERS TO FREQUENTLY ASKED QUESTIONS RELATING TO THE CONTENT-RELATED WEB APPLICATION SERVICES
7906
PROVIDING NEWS READER CAPABILITIES IN THE NETWORK FRAMEWORK
7908
AFFORDING CHAT ROOM CAPABILITIES IN THE NETWORK FRAMEWORK
7910
ENABLING PLAYBACK CAPABILITIES IN THE NETWORK FRAMEWORK
7912
PROVIDING FINANCIAL TRANSACTIONAL CAPABILITIES IN THE NETWORK FRAMEWORK
7914
5320

Figure 79

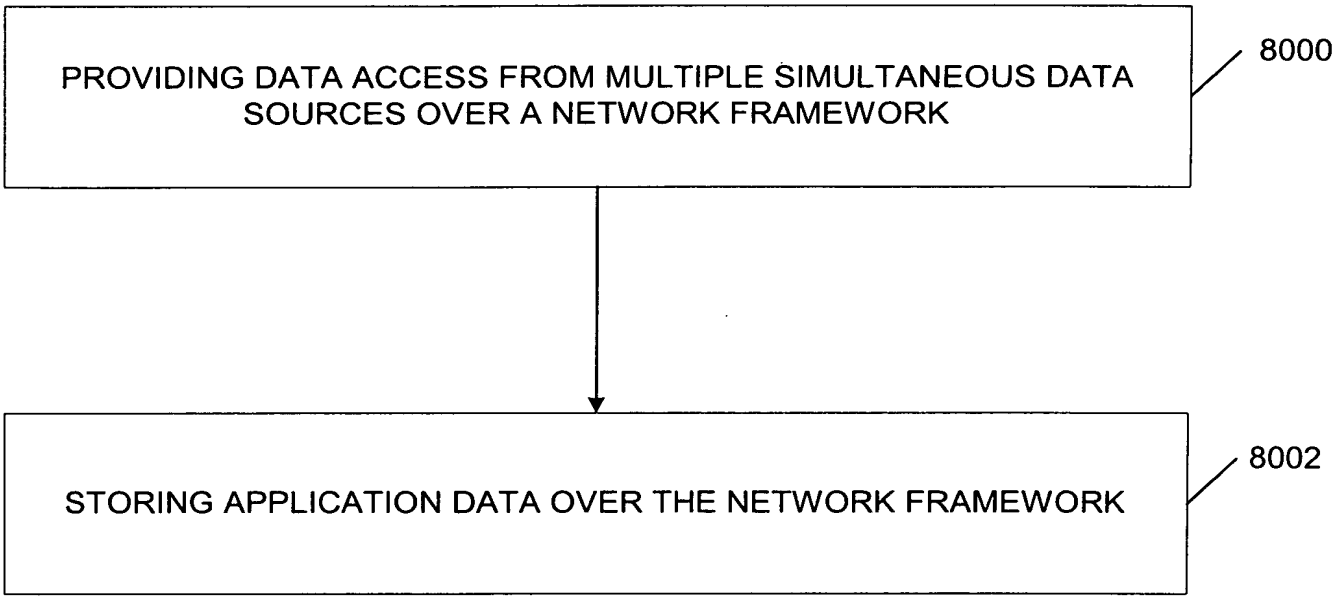

PROVIDING DATA ACCESS FROM MULTIPLE SIMULTANEOUS DATA SOURCES OVER A NETWORK FRAMEWORK
8000
STORING APPLICATION DATA OVER THE NETWORK FRAMEWORK
8002
5324

Figure 80

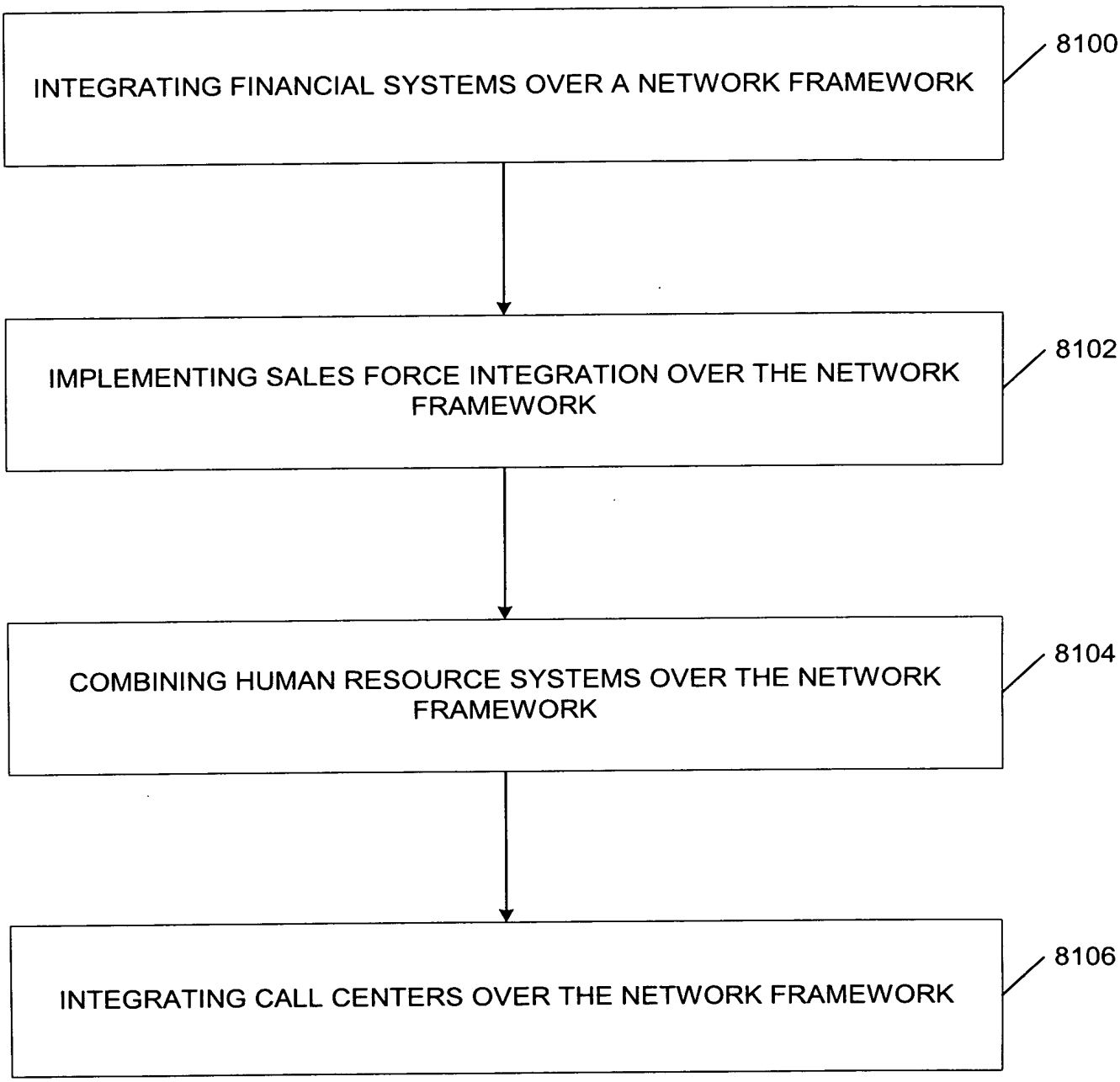

INTEGRATING FINANCIAL SYSTEMS OVER A NETWORK FRAMEWORK
8100
IMPLEMENTING SALES FORCE INTEGRATION OVER THE NETWORK FRAMEWORK
8102
COMBINING HUMAN RESOURCE SYSTEMS OVER THE NETWORK FRAMEWORK
8104
INTEGRATING CALL CENTERS OVER THE NETWORK FRAMEWORK
8106
5812

Figure 81

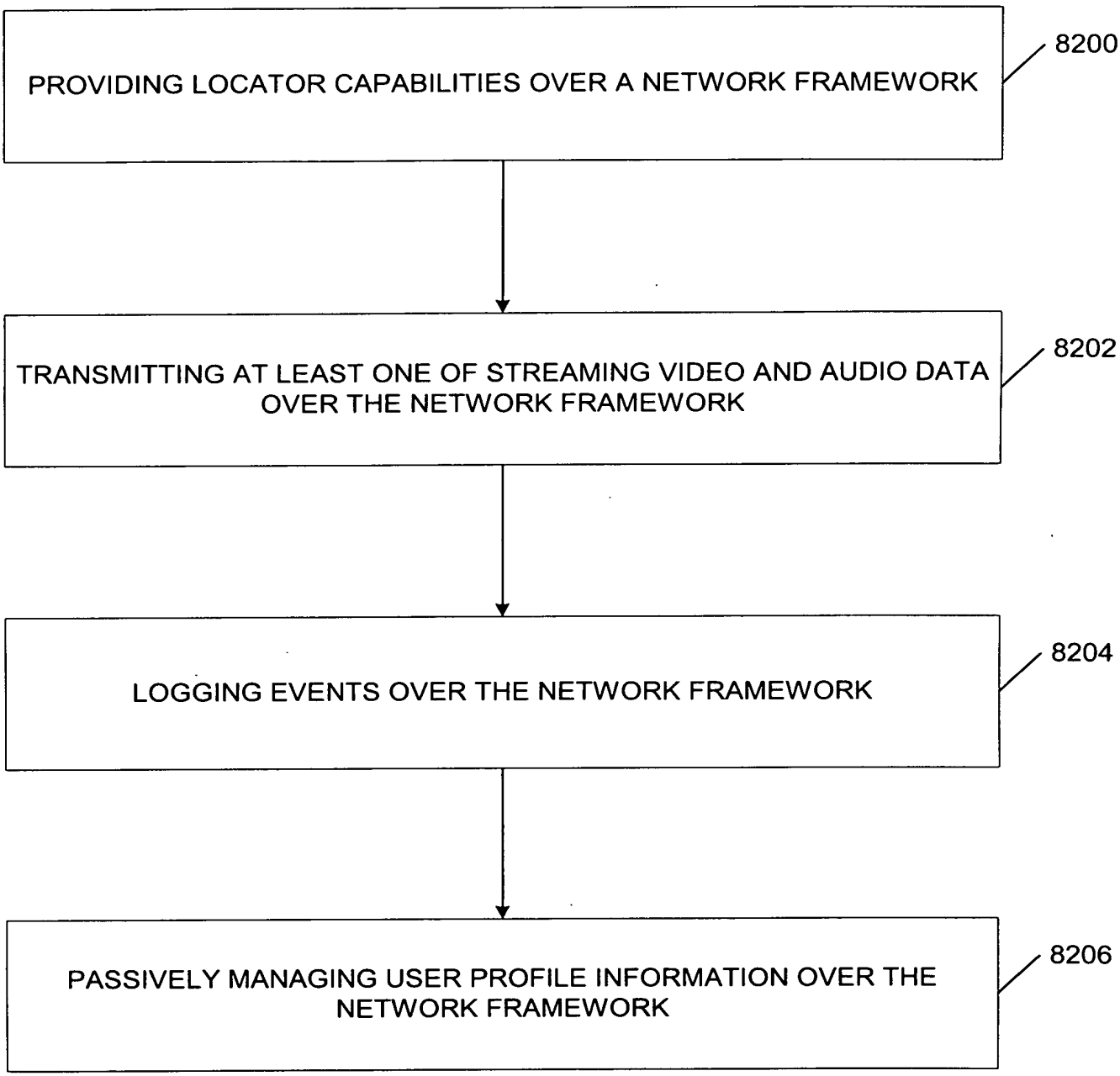

PROVIDING LOCATOR CAPABILITIES OVER A NETWORK FRAMEWORK
8200
TRANSMITTING AT LEAST ONE OF STREAMING VIDEO AND AUDIO DATA OVER THE NETWORK FRAMEWORK
8202
LOGGING EVENTS OVER THE NETWORK FRAMEWORK
8204
PASSIVELY MANAGING USER PROFILE INFORMATION OVER THE NETWORK FRAMEWORK
8206
5326

Figure 82

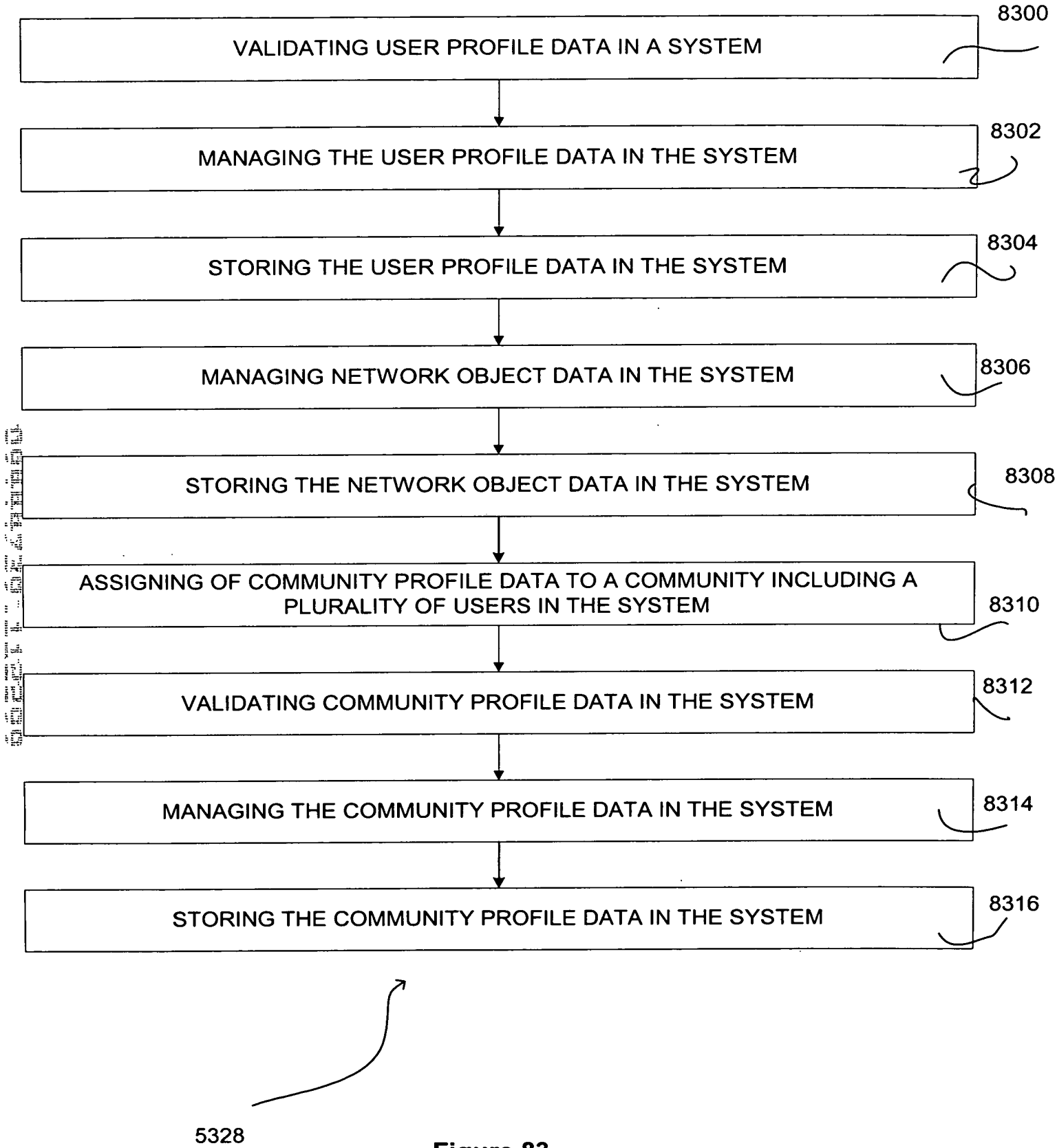

VALIDATING USER PROFILE DATA IN A SYSTEM
8300
MANAGING THE USER PROFILE DATA IN THE SYSTEM
8302
STORING THE USER PROFILE DATA IN THE SYSTEM
8304
MANAGING NETWORK OBJECT DATA IN THE SYSTEM
8306
STORING THE NETWORK OBJECT DATA IN THE SYSTEM
8308
ASSIGNING OF COMMUNITY PROFILE DATA TO A COMMUNITY INCLUDING A PLURALITY OF USERS IN THE SYSTEM
8310
VALIDATING COMMUNITY PROFILE DATA IN THE SYSTEM
8312
MANAGING THE COMMUNITY PROFILE DATA IN THE SYSTEM
8314
STORING THE COMMUNITY PROFILE DATA IN THE SYSTEM
8316
5328

Figure 83

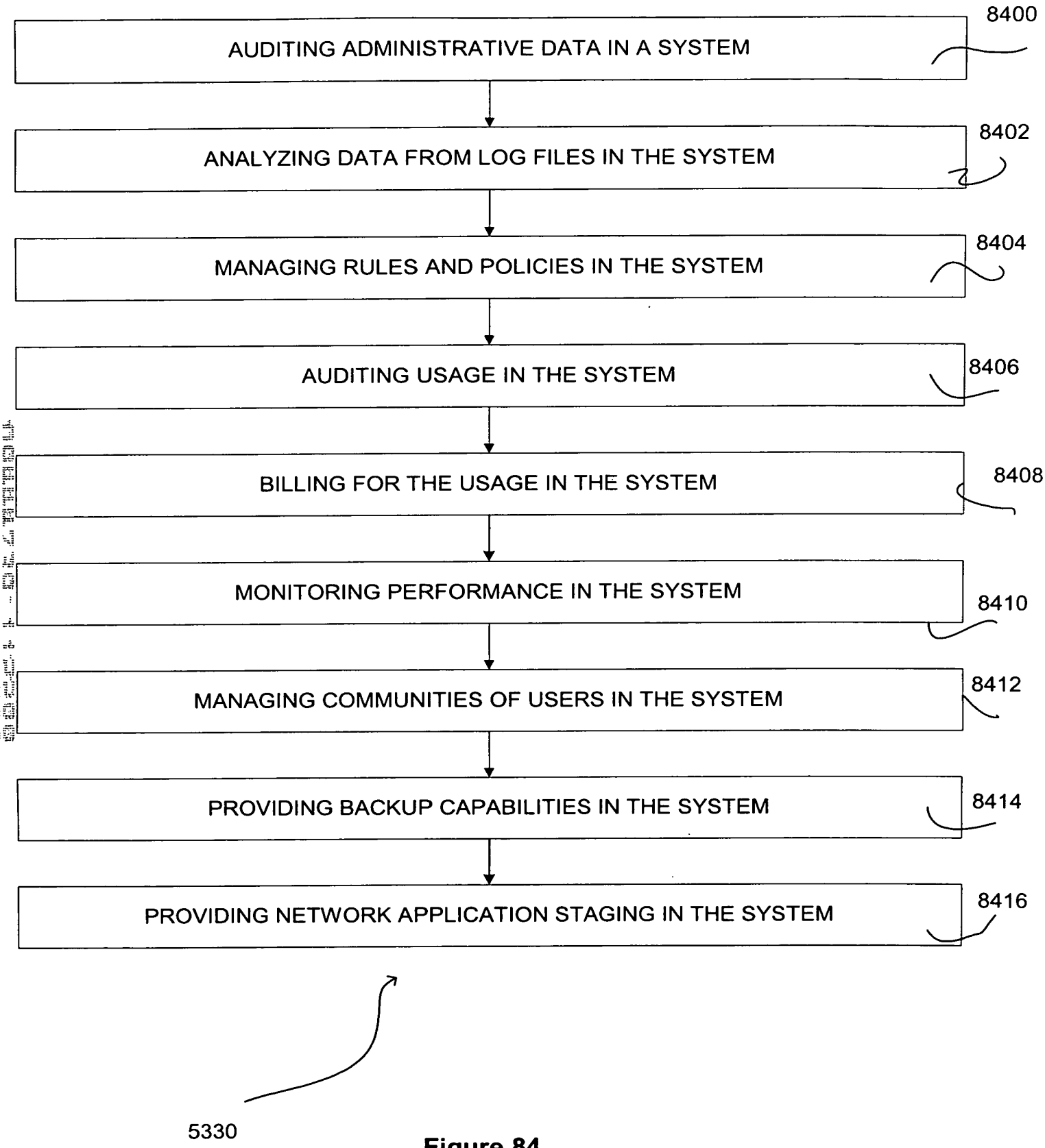

AUDITING ADMINISTRATIVE DATA IN A SYSTEM
8400
ANALYZING DATA FROM LOG FILES IN THE SYSTEM
8402
MANAGING RULES AND POLICIES IN THE SYSTEM
8404
AUDITING USAGE IN THE SYSTEM
8406
BILLING FOR THE USAGE IN THE SYSTEM
8408
MONITORING PERFORMANCE IN THE SYSTEM
8410
MANAGING COMMUNITIES OF USERS IN THE SYSTEM
8412
PROVIDING BACKUP CAPABILITIES IN THE SYSTEM
8414
PROVIDING NETWORK APPLICATION STAGING IN THE SYSTEM
8416
5330

Figure 84

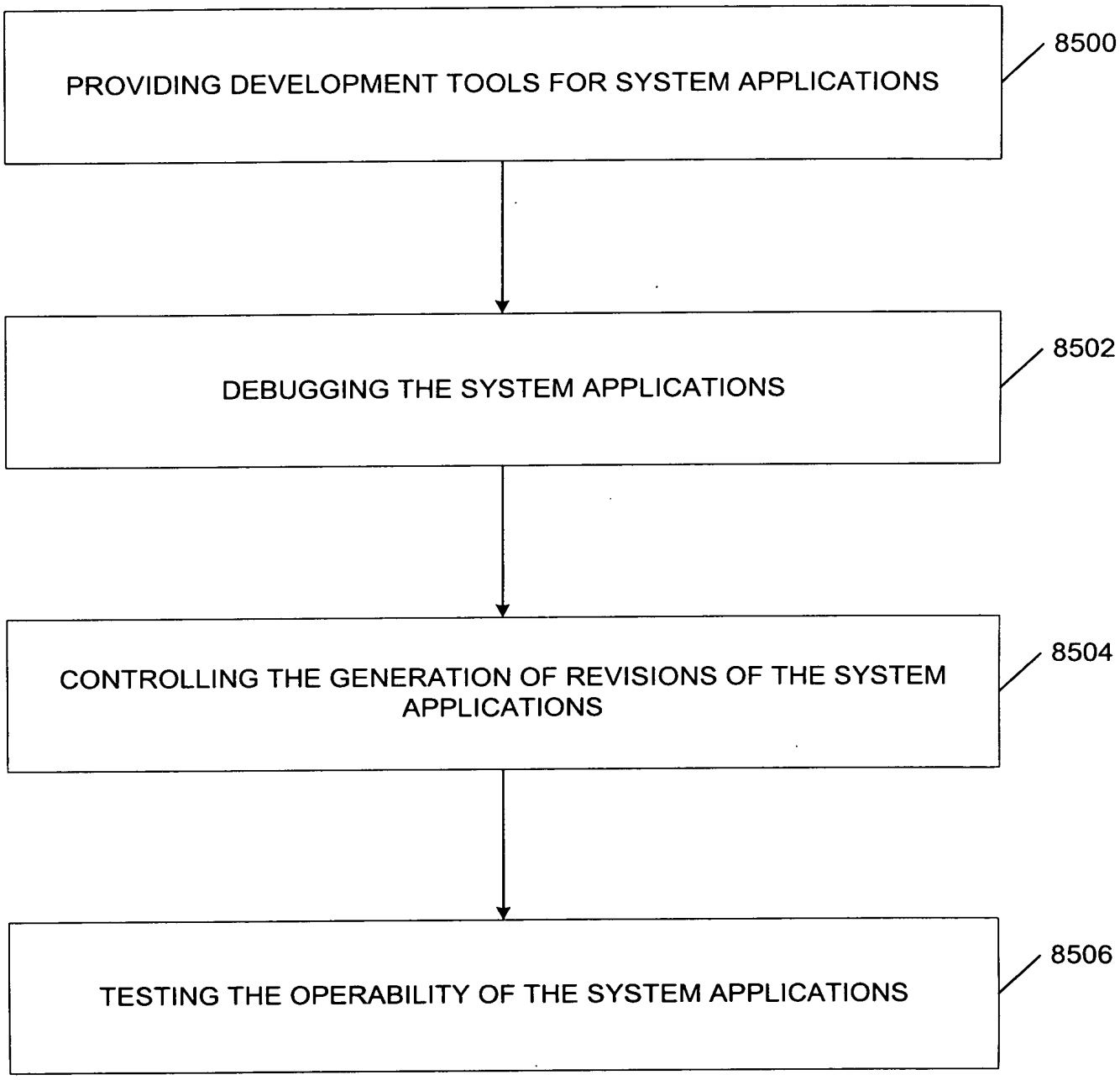

PROVIDING DEVELOPMENT TOOLS FOR SYSTEM APPLICATIONS
8500
DEBUGGING THE SYSTEM APPLICATIONS
8502
CONTROLLING THE GENERATION OF REVISIONS OF THE SYSTEM APPLICATIONS
8504
TESTING THE OPERABILITY OF THE SYSTEM APPLICATIONS
8506
5332

Figure 85

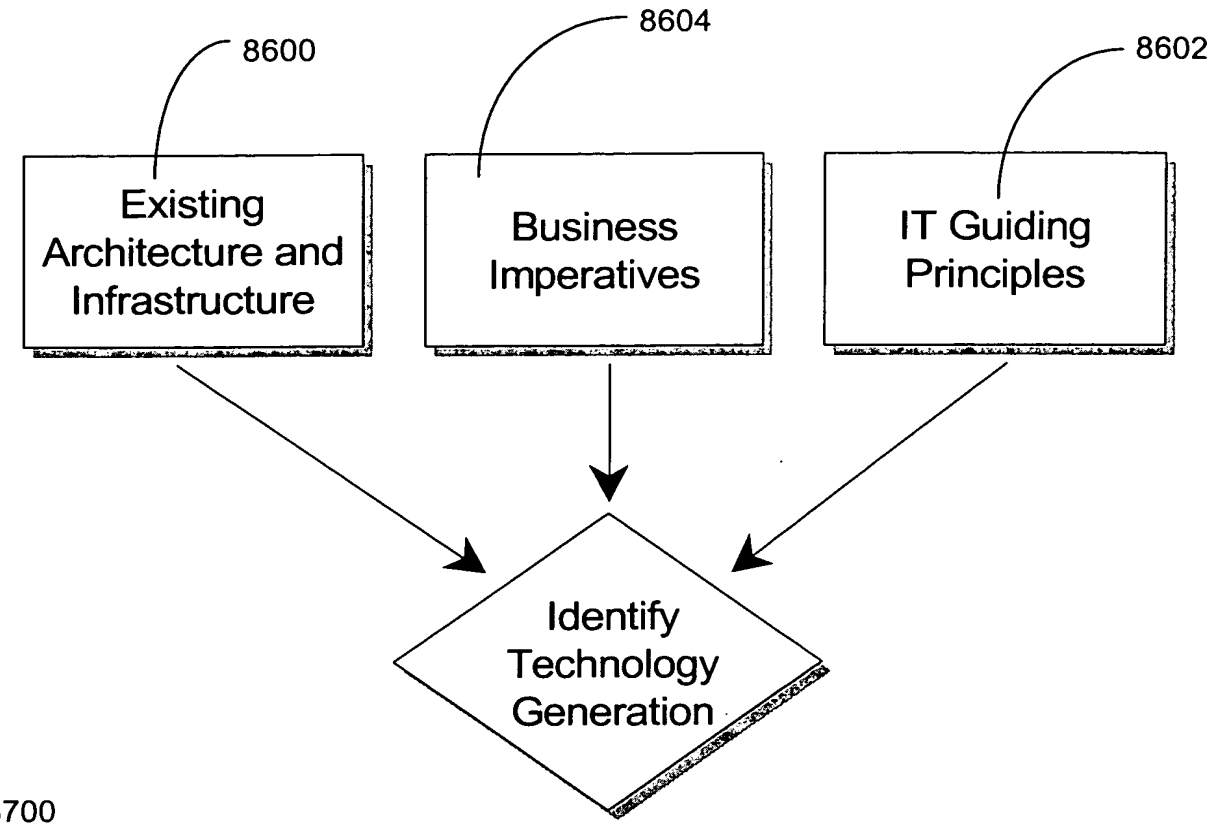


Figure 86

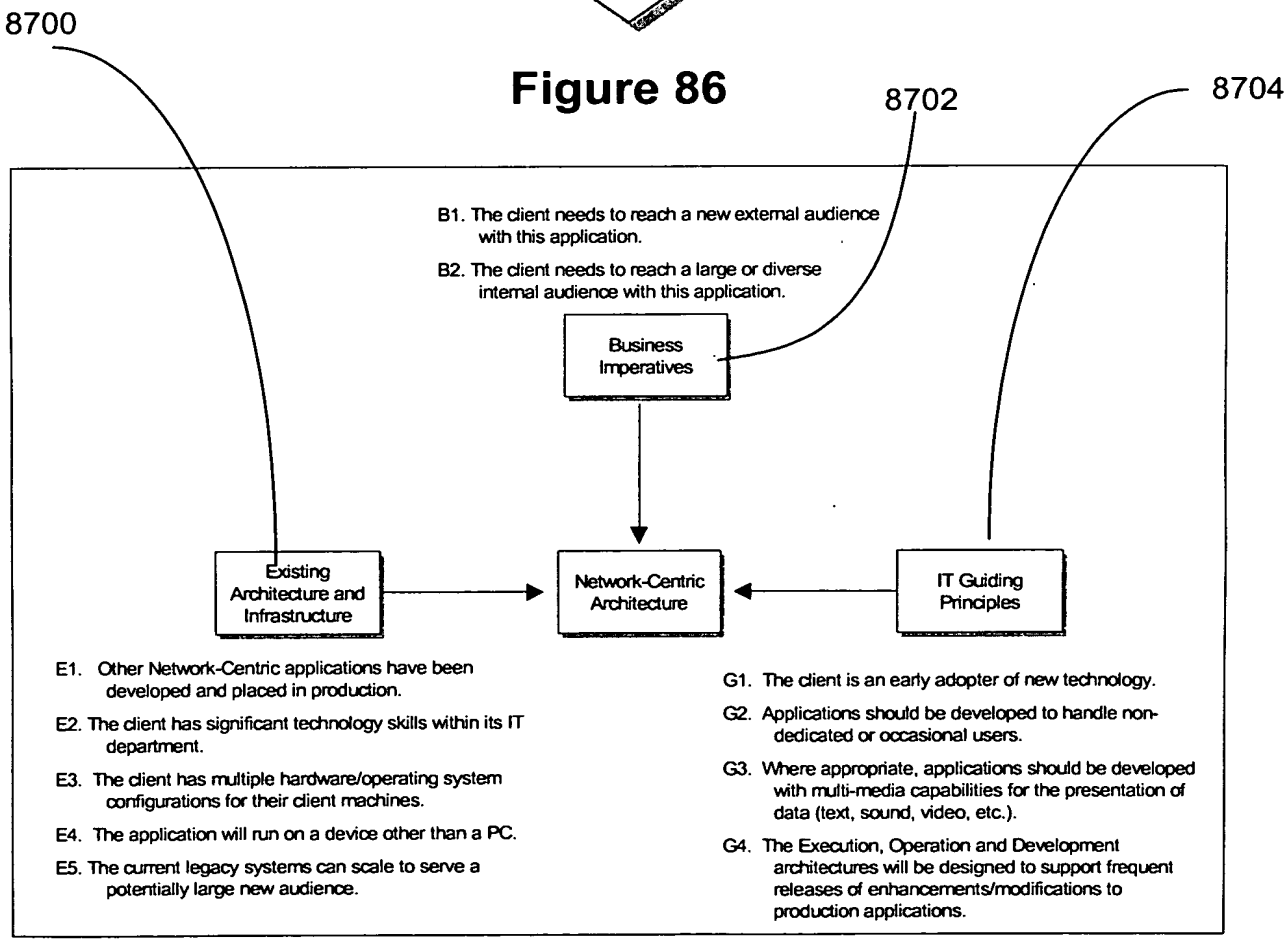


Figure 87

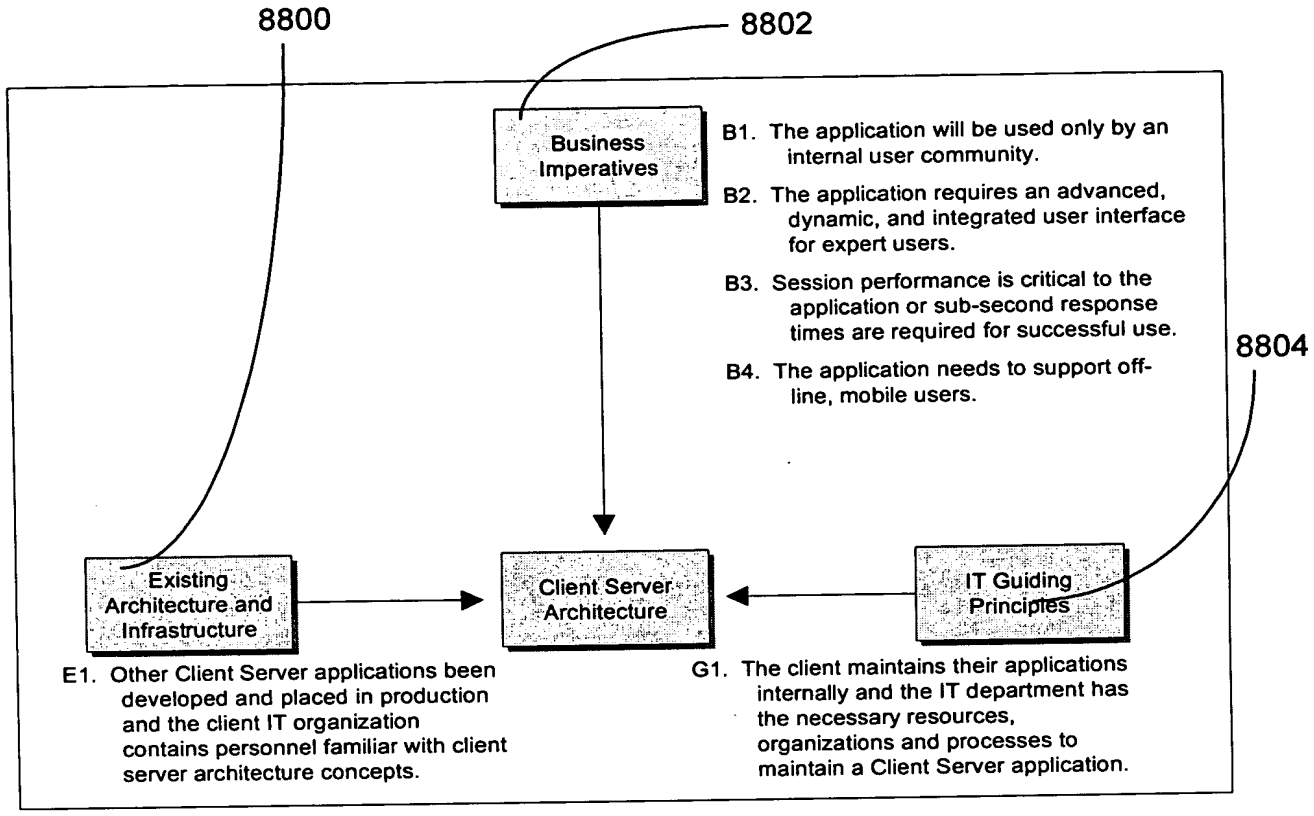


Figure 88

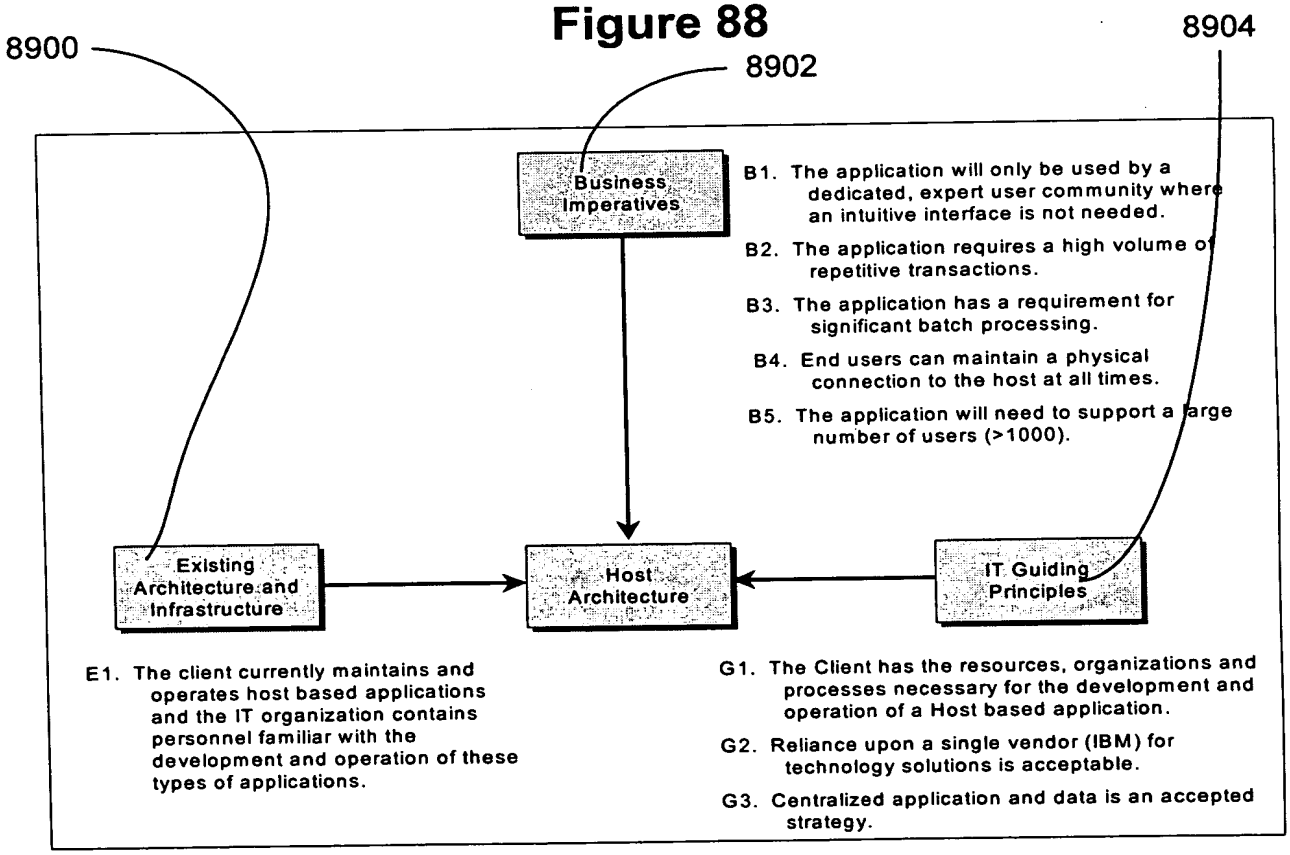


Figure 89

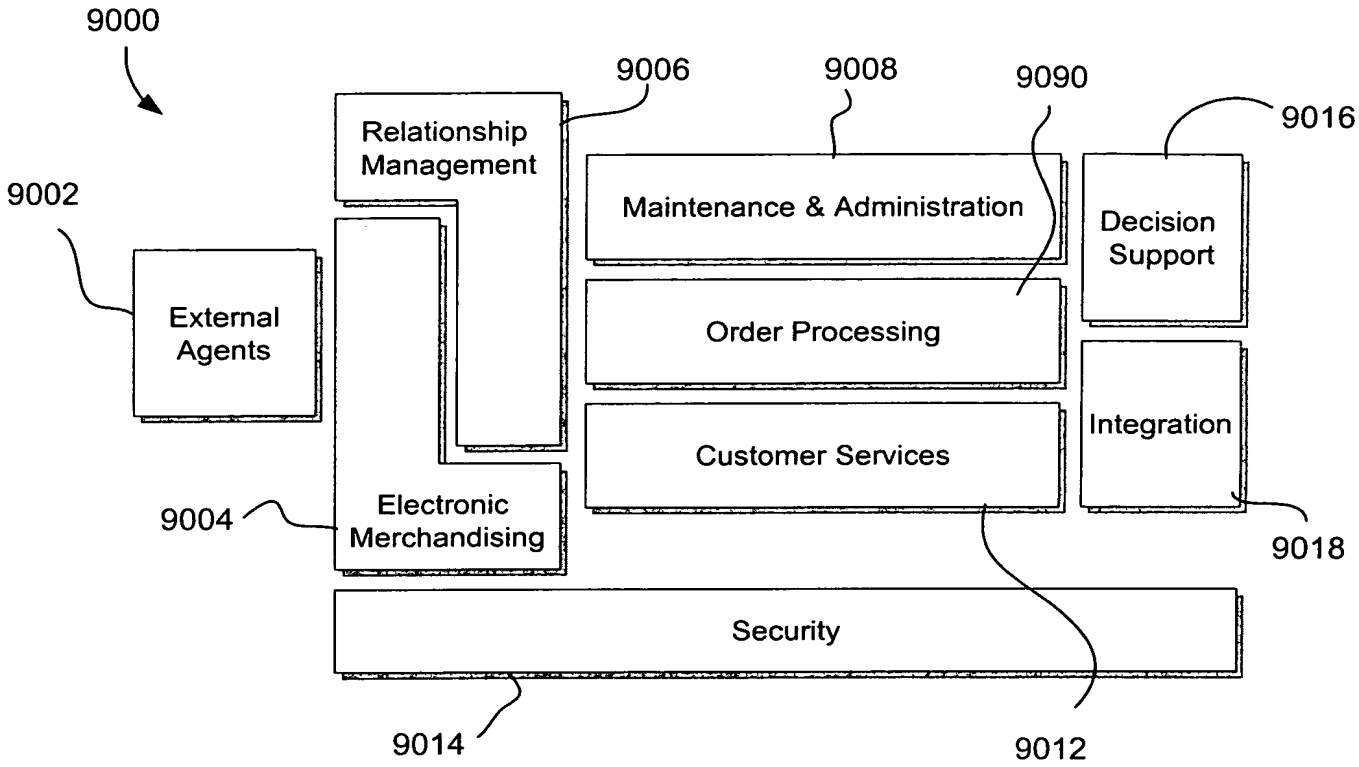


Figure 90

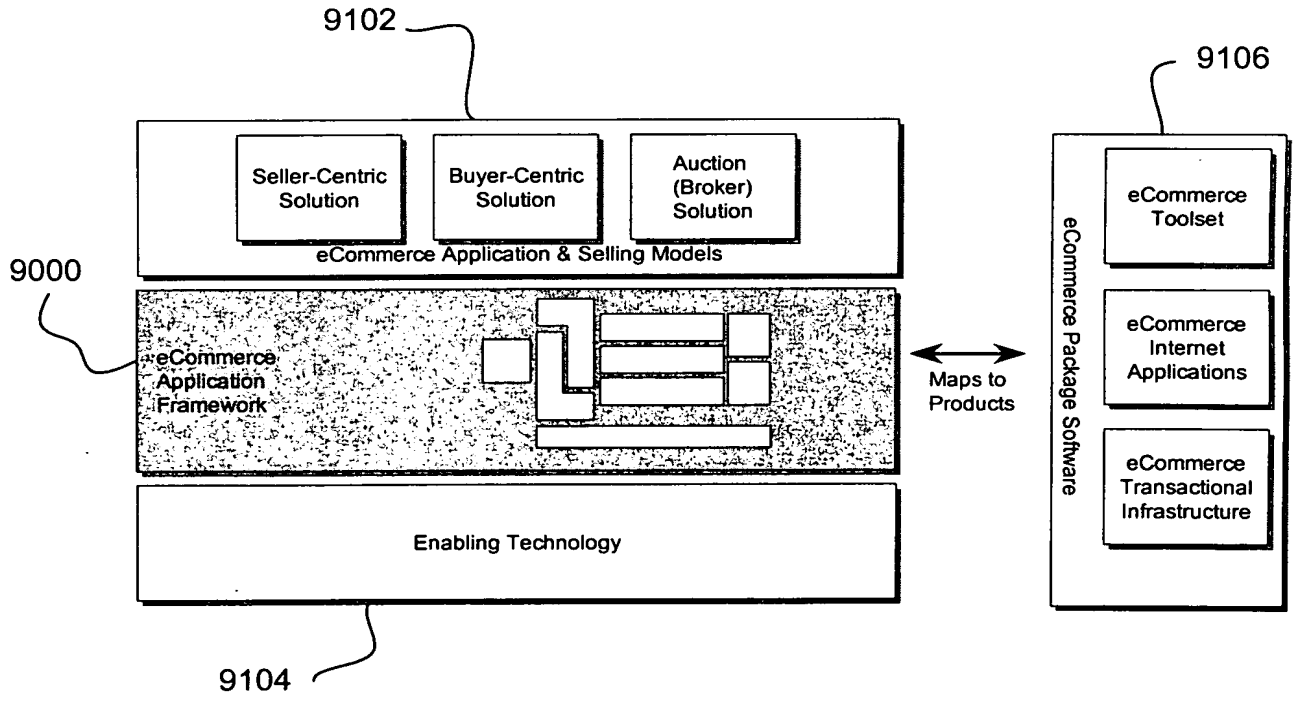


Figure 91

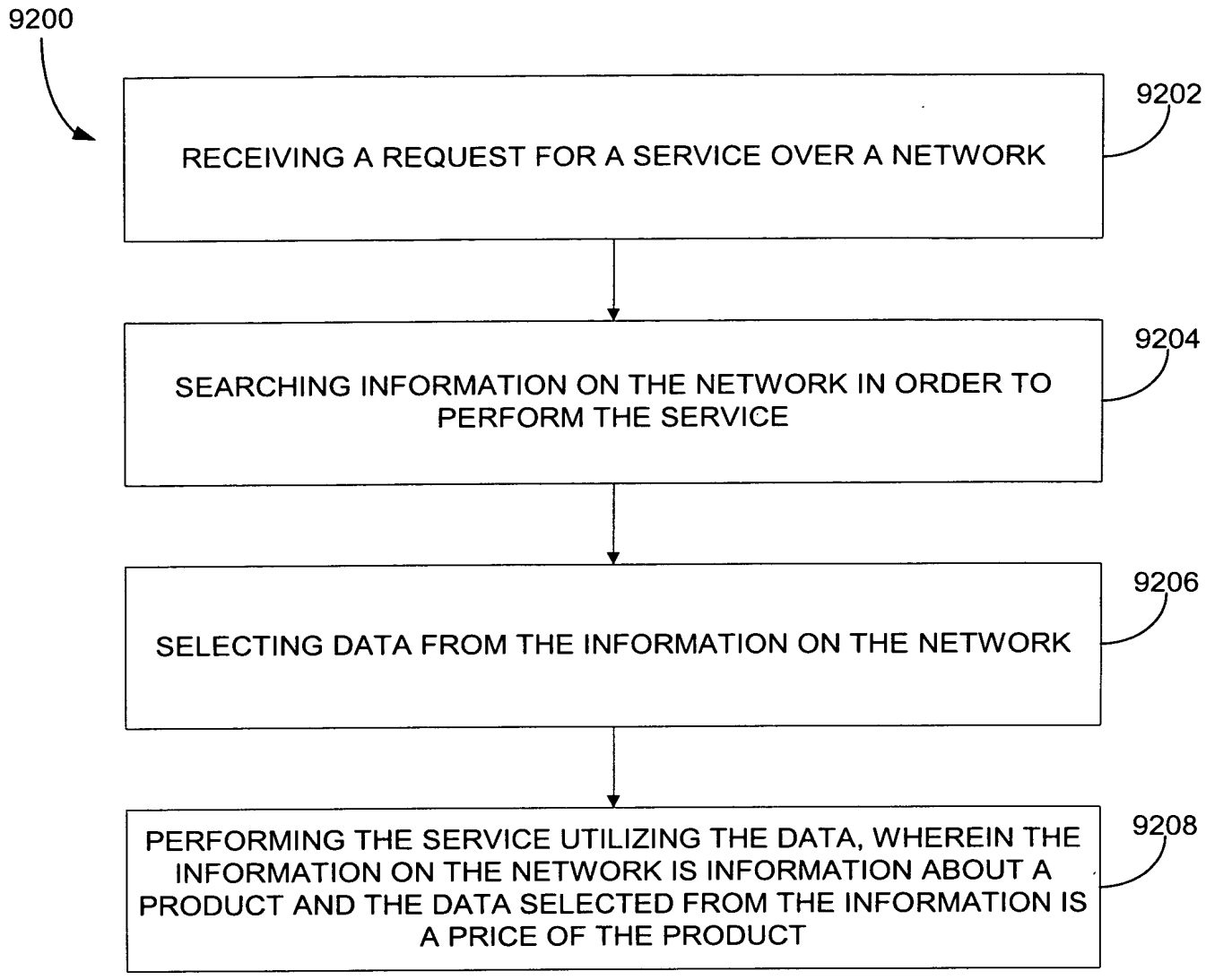

9200
RECEIVING A REQUEST FOR A SERVICE OVER A NETWORK
9202
SEARCHING INFORMATION ON THE NETWORK IN ORDER TO PERFORM THE SERVICE
9204
SELECTING DATA FROM THE INFORMATION ON THE NETWORK
9206
PERFORMING THE SERVICE UTILIZING THE DATA, WHEREIN THE INFORMATION ON THE NETWORK IS INFORMATION ABOUT A PRODUCT AND THE DATA SELECTED FROM THE INFORMATION IS A PRICE OF THE PRODUCT
9208

Figure 92

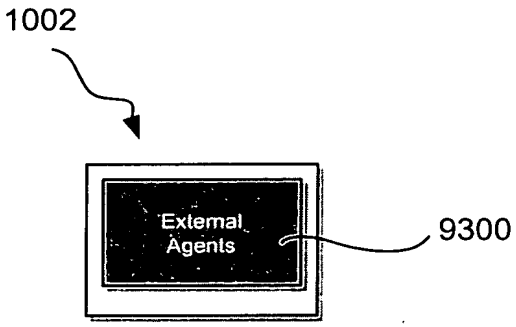


Figure 93

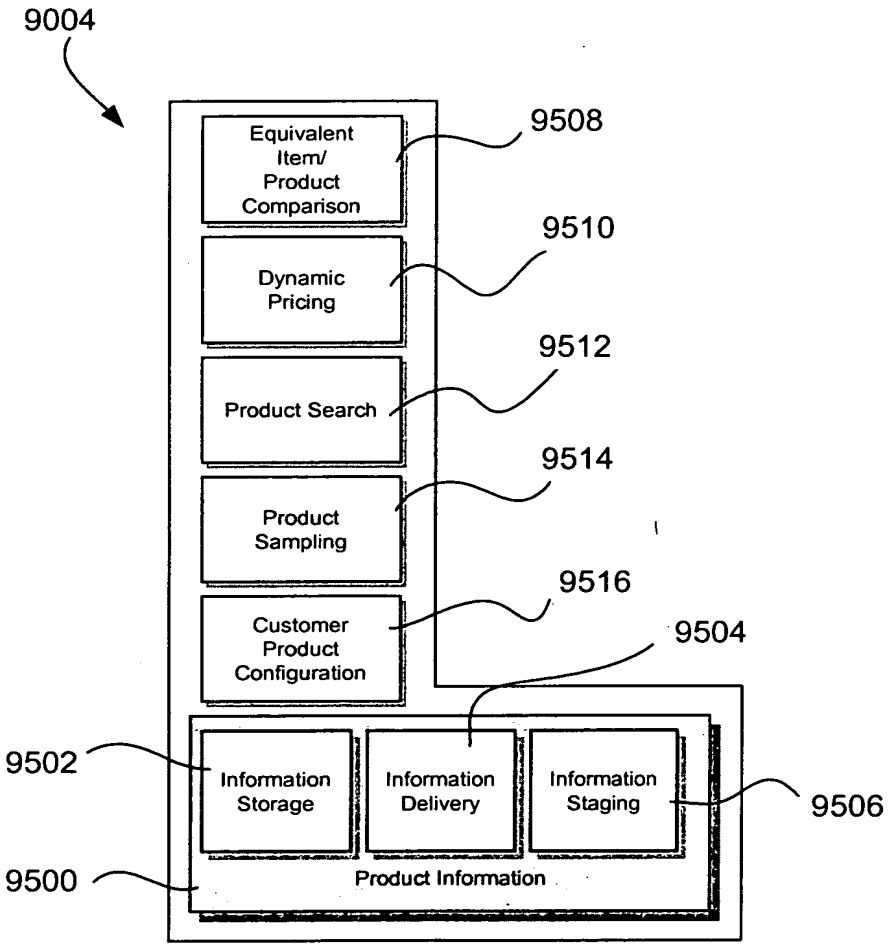


Figure 95

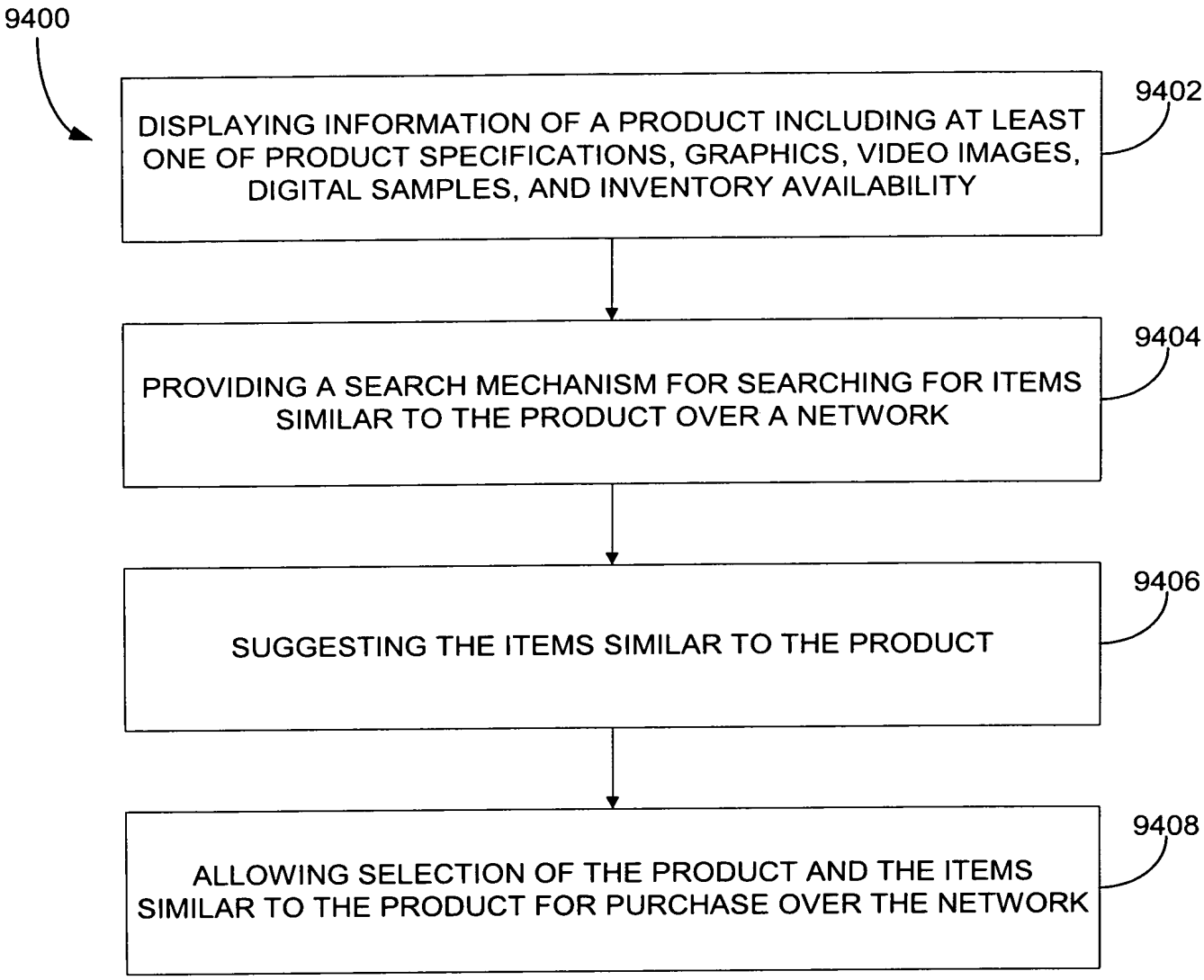

9400
DISPLAYING INFORMATION OF A PRODUCT INCLUDING AT LEAST ONE OF PRODUCT SPECIFICATIONS, GRAPHICS, VIDEO IMAGES, DIGITAL SAMPLES, AND INVENTORY AVAILABILITY
9402
PROVIDING A SEARCH MECHANISM FOR SEARCHING FOR ITEMS SIMILAR TO THE PRODUCT OVER A NETWORK
9404
SUGGESTING THE ITEMS SIMILAR TO THE PRODUCT
9406
ALLOWING SELECTION OF THE PRODUCT AND THE ITEMS SIMILAR TO THE PRODUCT FOR PURCHASE OVER THE NETWORK
9408

Figure 94

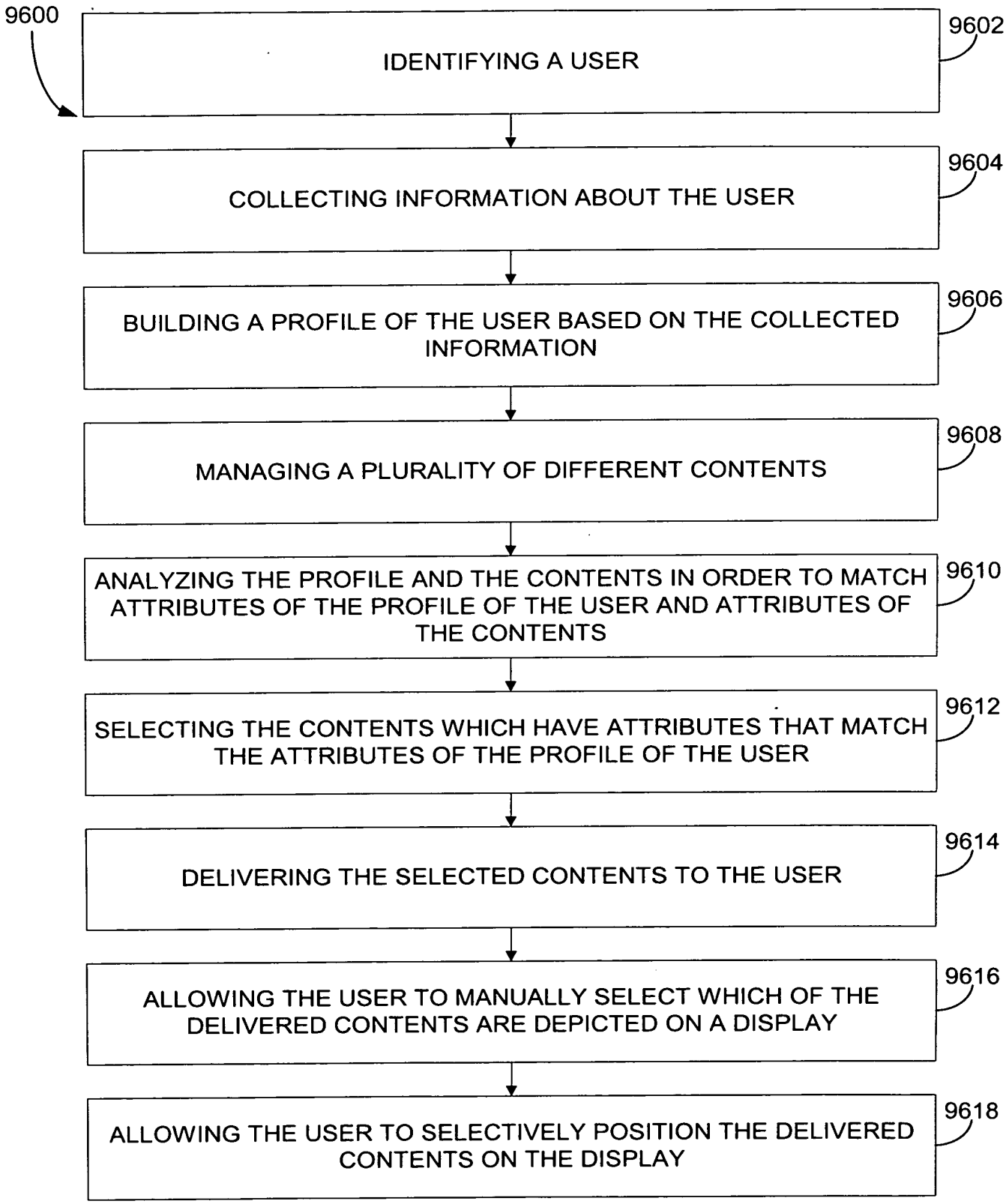

9600
IDENTIFYING A USER
9602
COLLECTING INFORMATION ABOUT THE USER
9604
BUILDING A PROFILE OF THE USER BASED ON THE COLLECTED INFORMATION
9606
MANAGING A PLURALITY OF DIFFERENT CONTENTS
9608
ANALYZING THE PROFILE AND THE CONTENTS IN ORDER TO MATCH ATTRIBUTES OF THE PROFILE OF THE USER AND ATTRIBUTES OF THE CONTENTS
9610
SELECTING THE CONTENTS WHICH HAVE ATTRIBUTES THAT MATCH THE ATTRIBUTES OF THE PROFILE OF THE USER
9612
DELIVERING THE SELECTED CONTENTS TO THE USER
9614
ALLOWING THE USER TO MANUALLY SELECT WHICH OF THE DELIVERED CONTENTS ARE DEPICTED ON A DISPLAY
9616
ALLOWING THE USER TO SELECTIVELY POSITION THE DELIVERED CONTENTS ON THE DISPLAY
9618

Figure 96

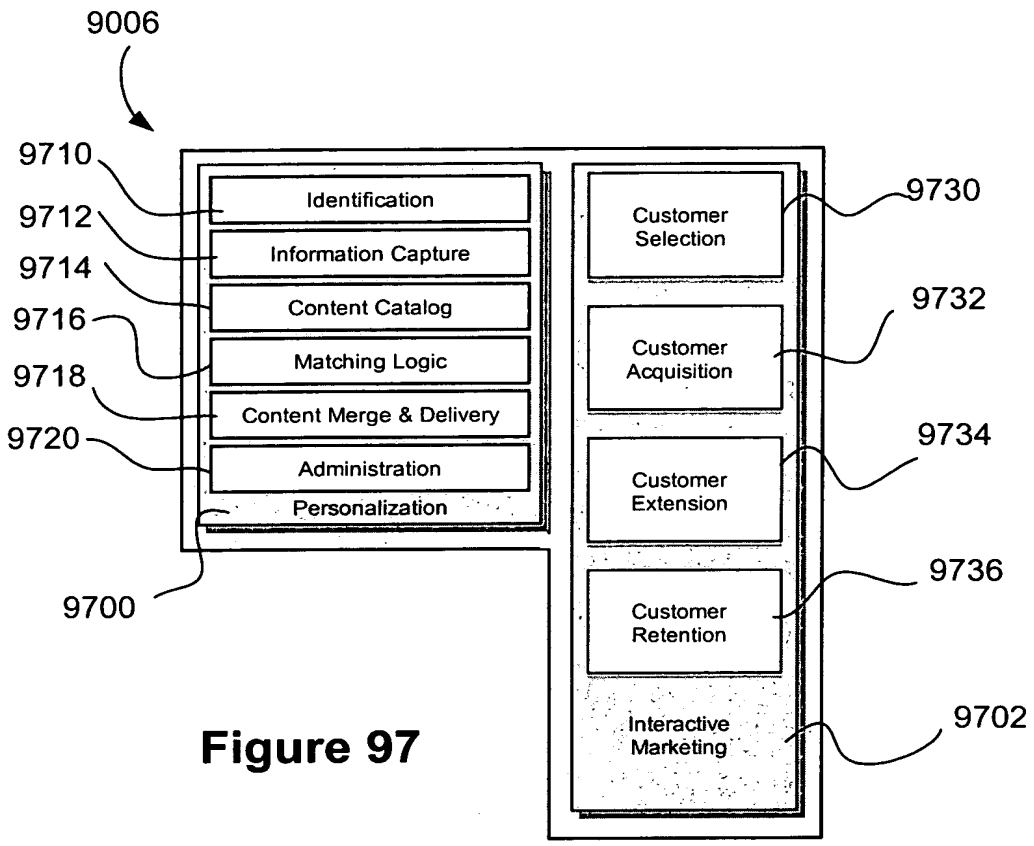


Figure 97

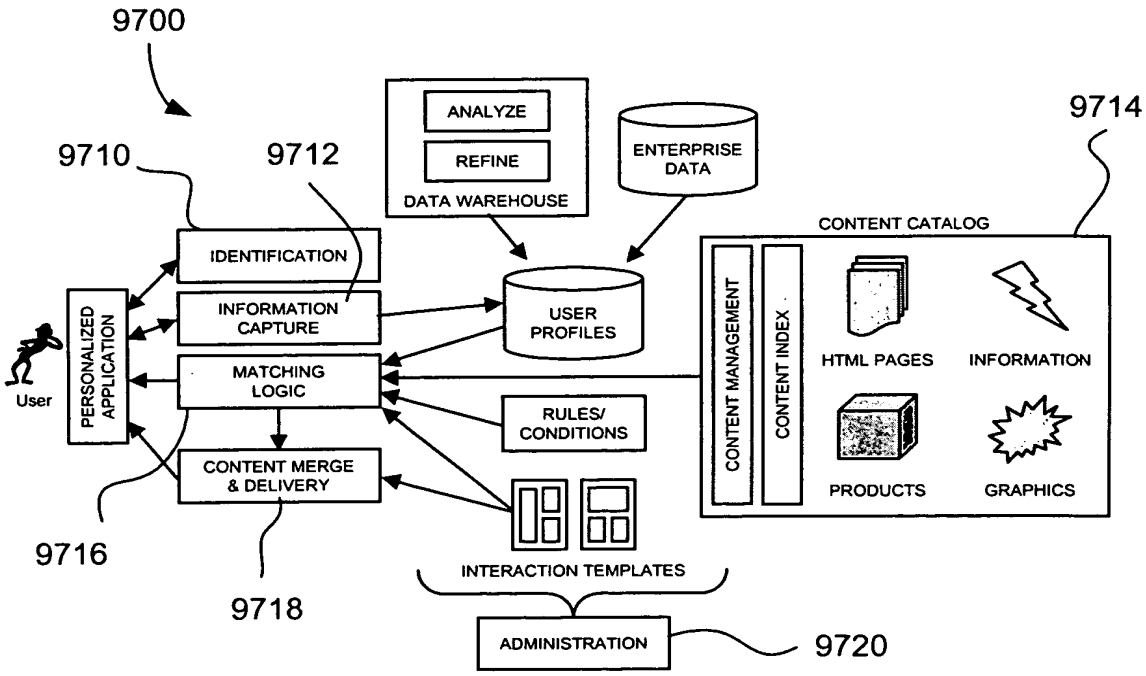


Figure 98

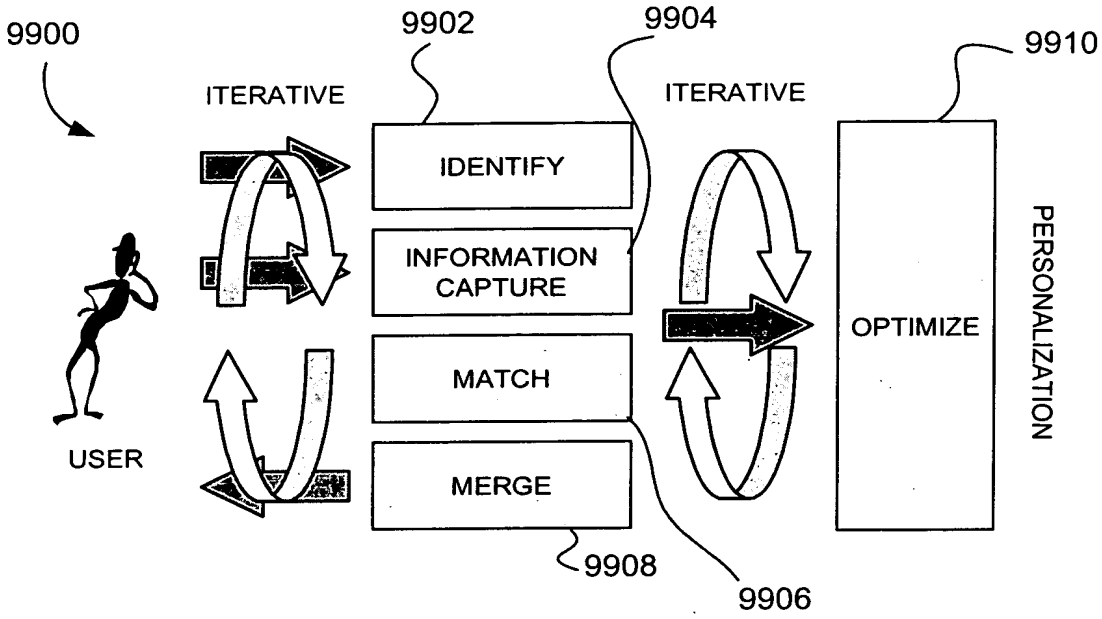


Figure 99

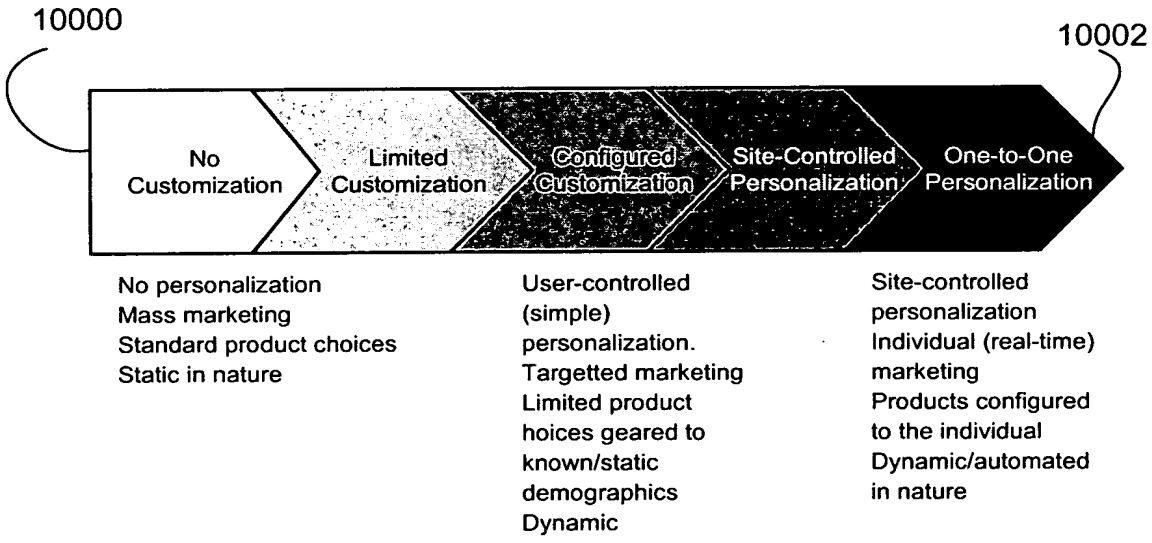


Figure 100

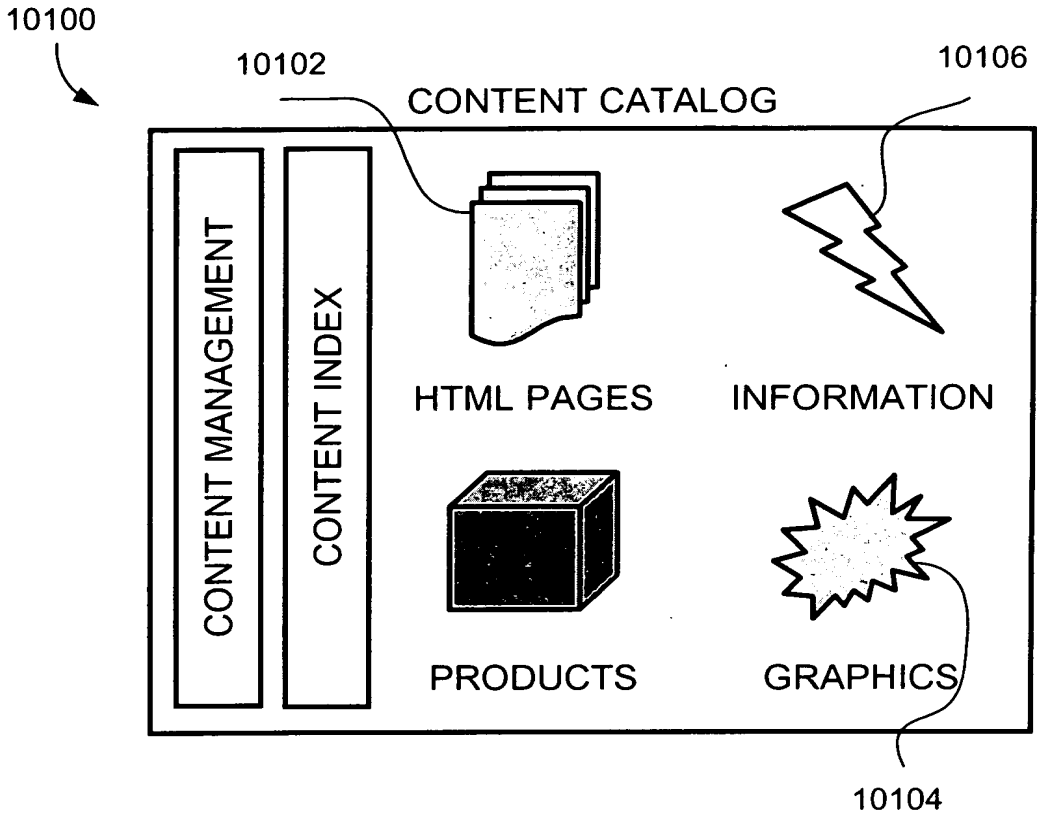


Figure 101

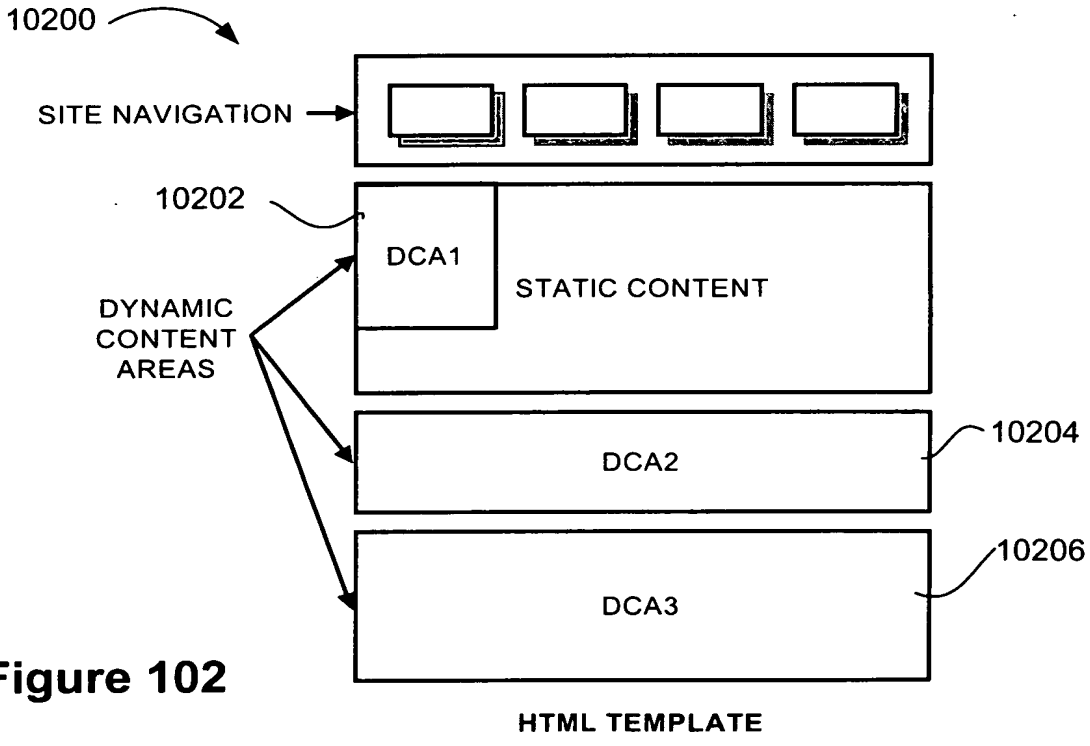


Figure 102

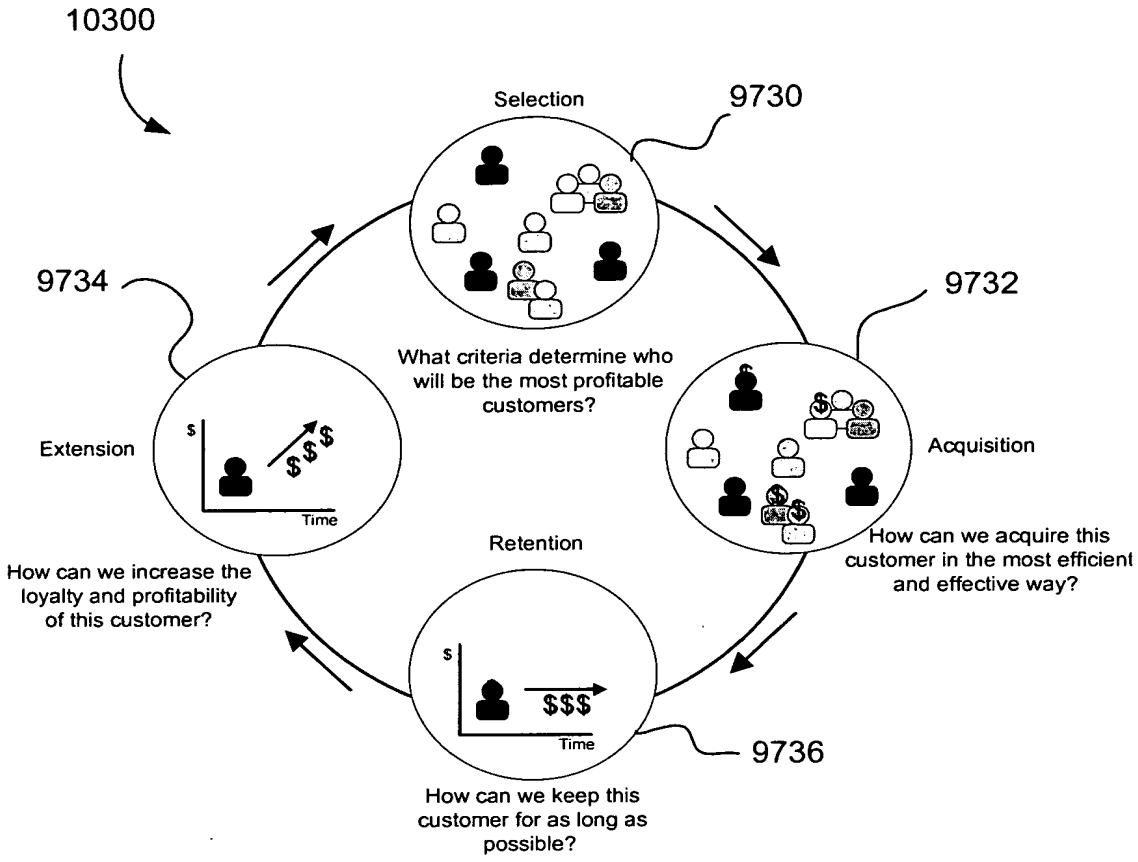


Figure 103

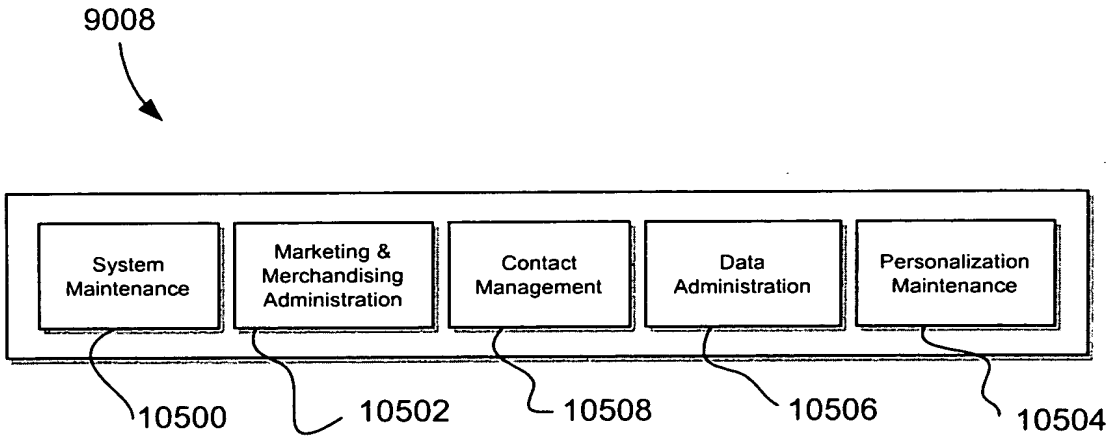


Figure 105

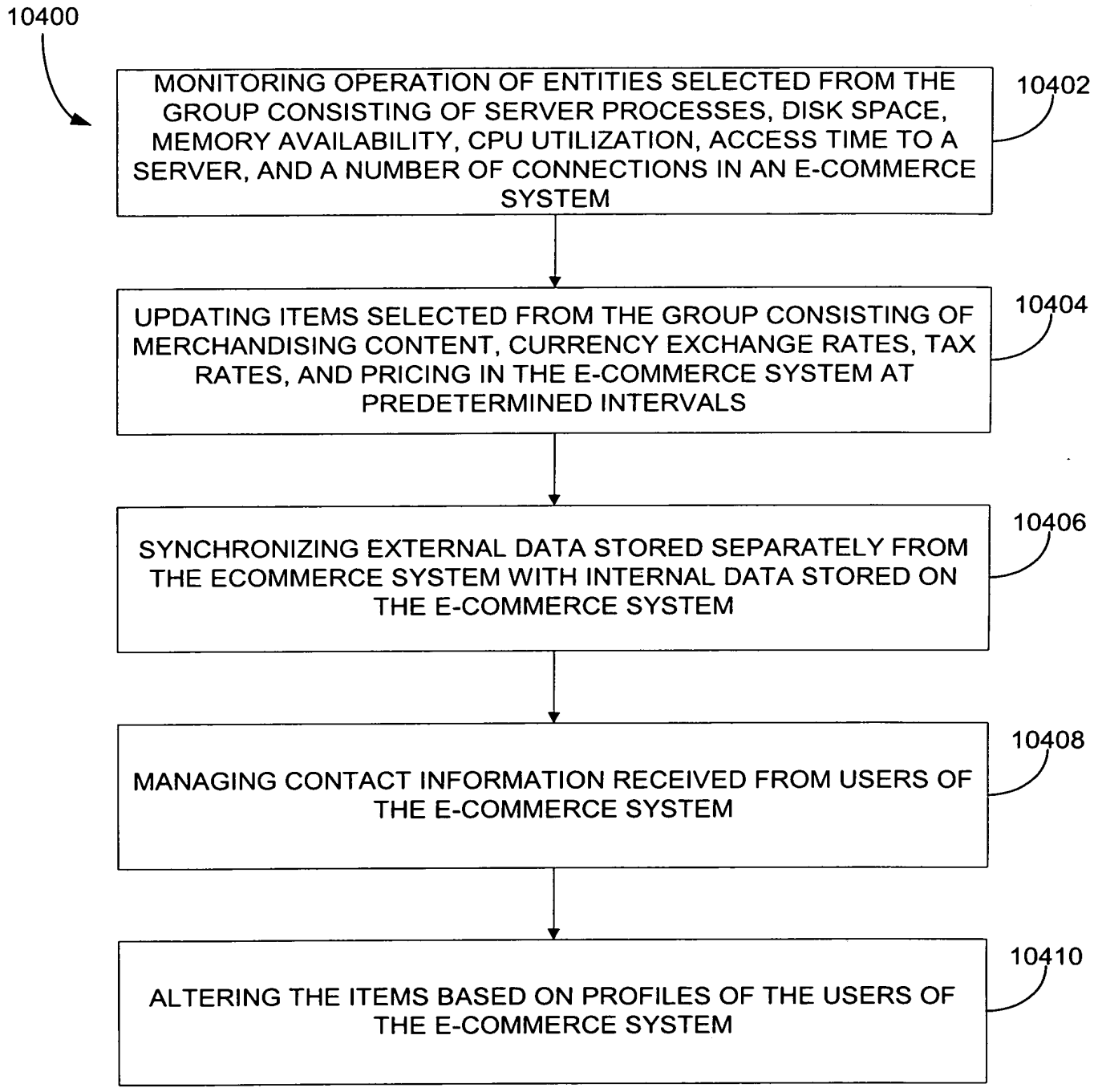

10400
MONITORING OPERATION OF ENTITIES SELECTED FROM THE GROUP CONSISTING OF SERVER PROCESSES, DISK SPACE, MEMORY AVAILABILITY, CPU UTILIZATION, ACCESS TIME TO A SERVER, AND A NUMBER OF CONNECTIONS IN AN E-COMMERCE SYSTEM
10402
UPDATING ITEMS SELECTED FROM THE GROUP CONSISTING OF MERCHANDISING CONTENT, CURRENCY EXCHANGE RATES, TAX RATES, AND PRICING IN THE E-COMMERCE SYSTEM AT PREDETERMINED INTERVALS
10404
SYNCHRONIZING EXTERNAL DATA STORED SEPARATELY FROM THE ECOMMERCE SYSTEM WITH INTERNAL DATA STORED ON THE E-COMMERCE SYSTEM
10406
MANAGING CONTACT INFORMATION RECEIVED FROM USERS OF THE E-COMMERCE SYSTEM
10408
ALTERING THE ITEMS BASED ON PROFILES OF THE USERS OF THE E-COMMERCE SYSTEM
10410

Figure 104

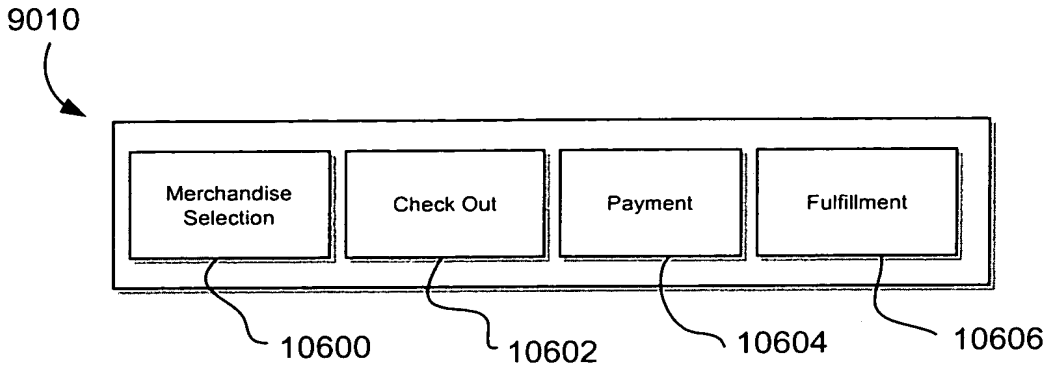


Figure 106

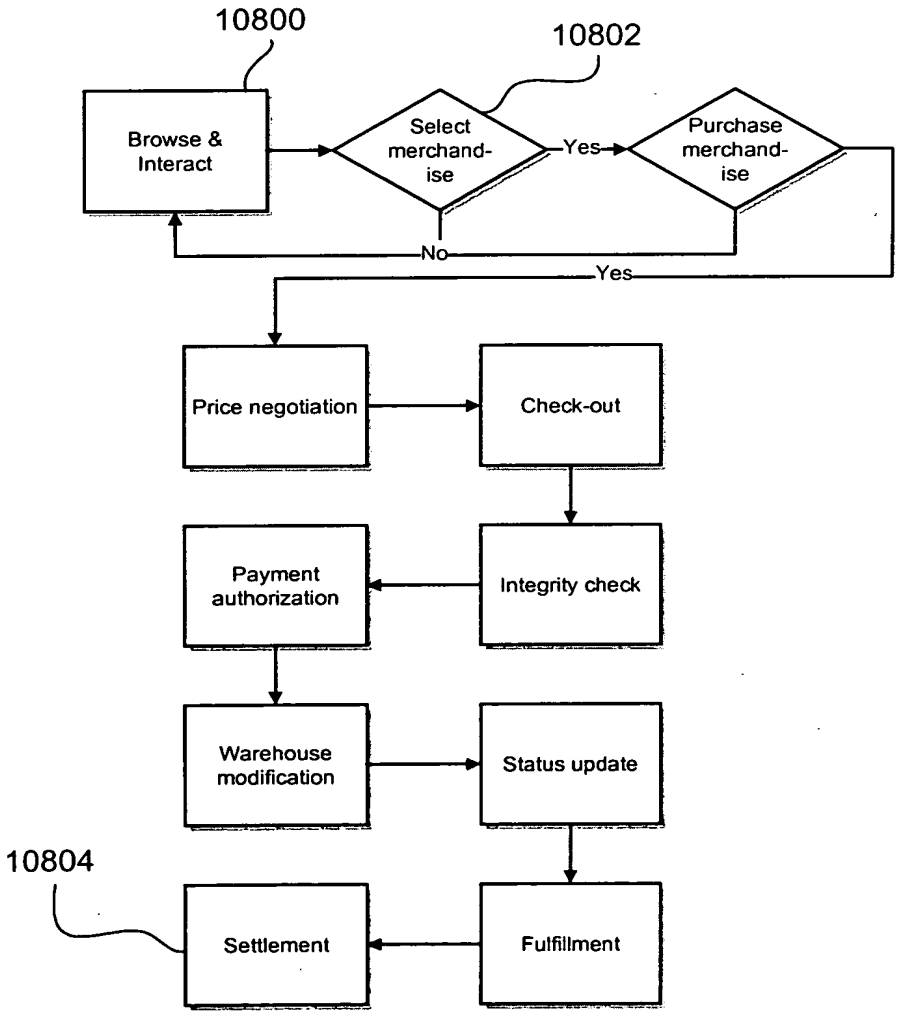


Figure 108

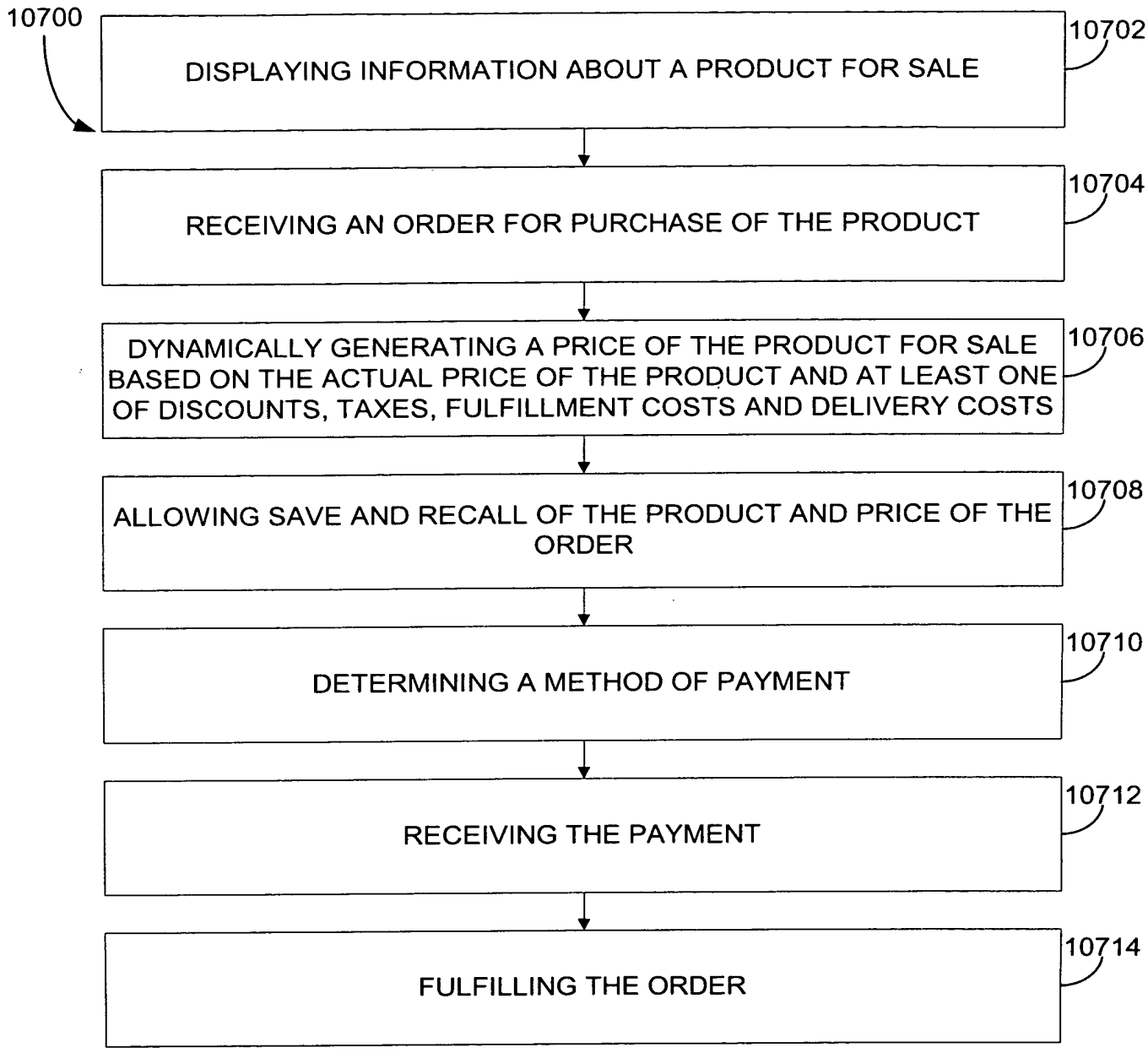

10700
DISPLAYING INFORMATION ABOUT A PRODUCT FOR SALE
10702
RECEIVING AN ORDER FOR PURCHASE OF THE PRODUCT
10704
DYNAMICALLY GENERATING A PRICE OF THE PRODUCT FOR SALE BASED ON THE ACTUAL PRICE OF THE PRODUCT AND AT LEAST ONE OF DISCOUNTS, TAXES, FULFILLMENT COSTS AND DELIVERY COSTS
10706
ALLOWING SAVE AND RECALL OF THE PRODUCT AND PRICE OF THE ORDER
10708
DETERMINING A METHOD OF PAYMENT
10710
RECEIVING THE PAYMENT
10712
FULFILLING THE ORDER
10714

Figure 107

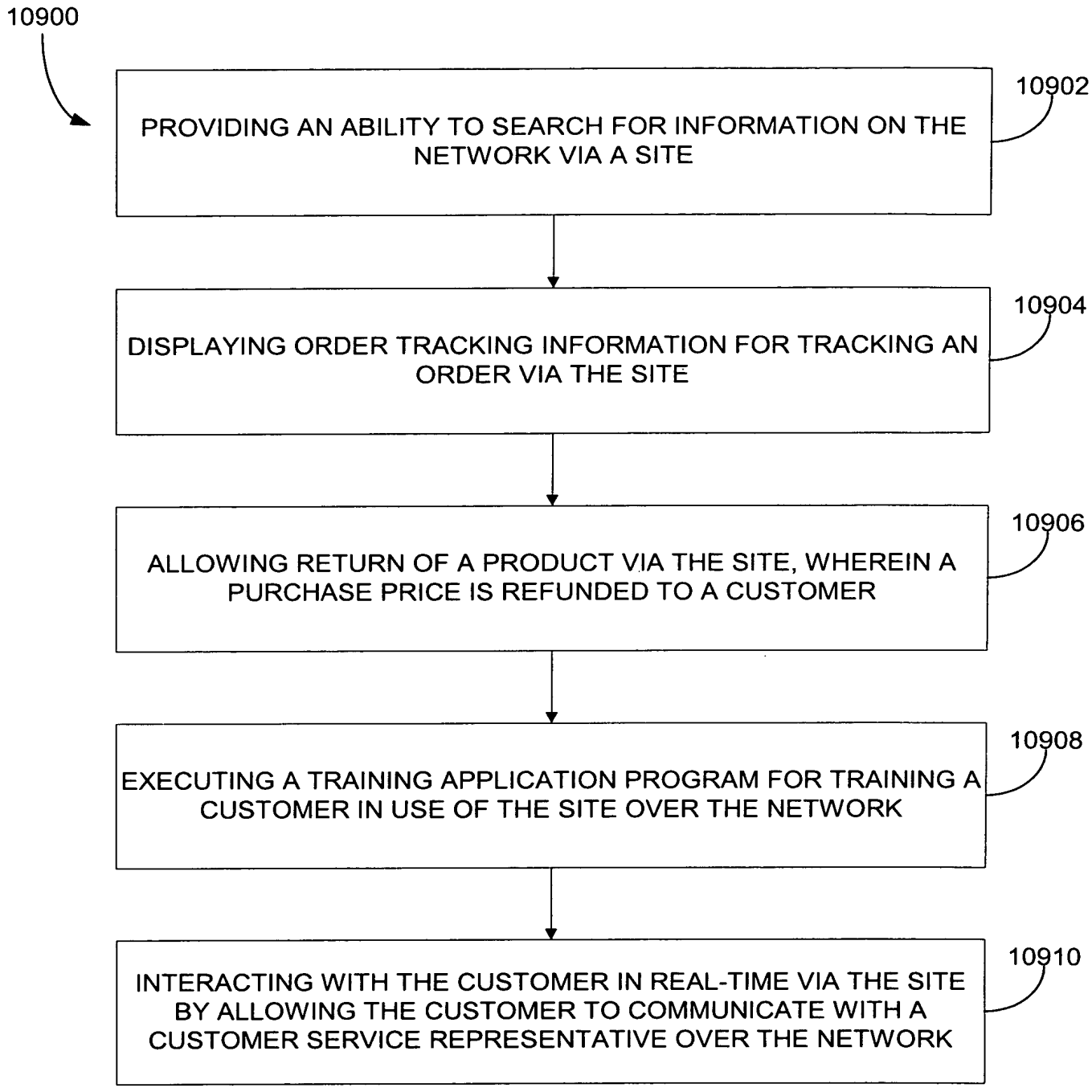

10900
PROVIDING AN ABILITY TO SEARCH FOR INFORMATION ON THE NETWORK VIA A SITE
10902
DISPLAYING ORDER TRACKING INFORMATION FOR TRACKING AN ORDER VIA THE SITE
10904
ALLOWING RETURN OF A PRODUCT VIA THE SITE, WHEREIN A PURCHASE PRICE IS REFUNDED TO A CUSTOMER
10906
EXECUTING A TRAINING APPLICATION PROGRAM FOR TRAINING A CUSTOMER IN USE OF THE SITE OVER THE NETWORK
10908
INTERACTING WITH THE CUSTOMER IN REAL-TIME VIA THE SITE BY ALLOWING THE CUSTOMER TO COMMUNICATE WITH A CUSTOMER SERVICE REPRESENTATIVE OVER THE NETWORK
10910

Figure 109

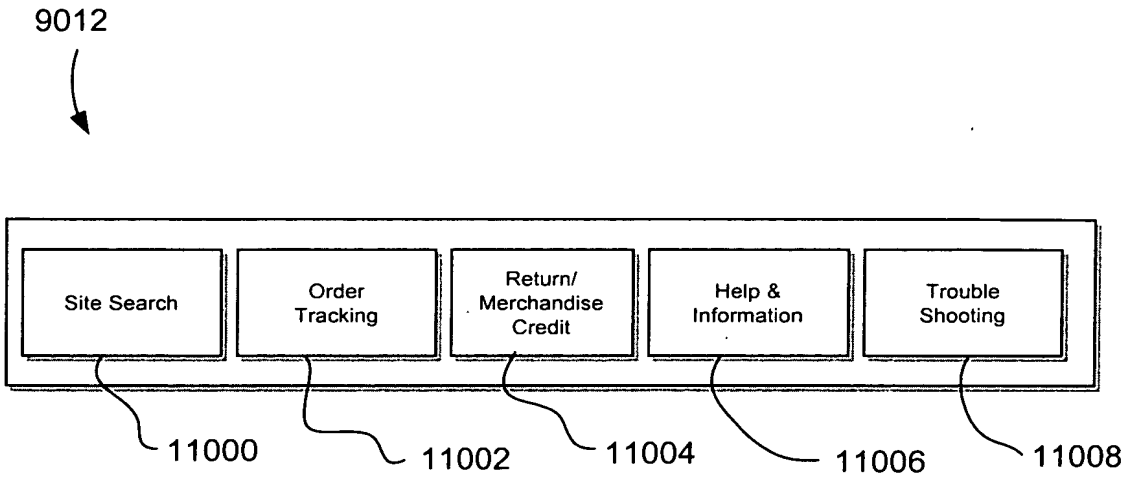


Figure 110

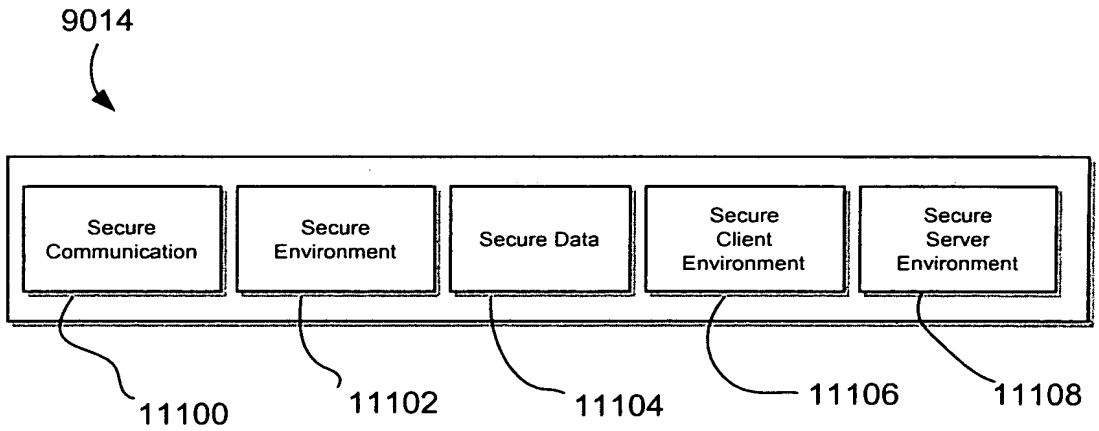


Figure 111

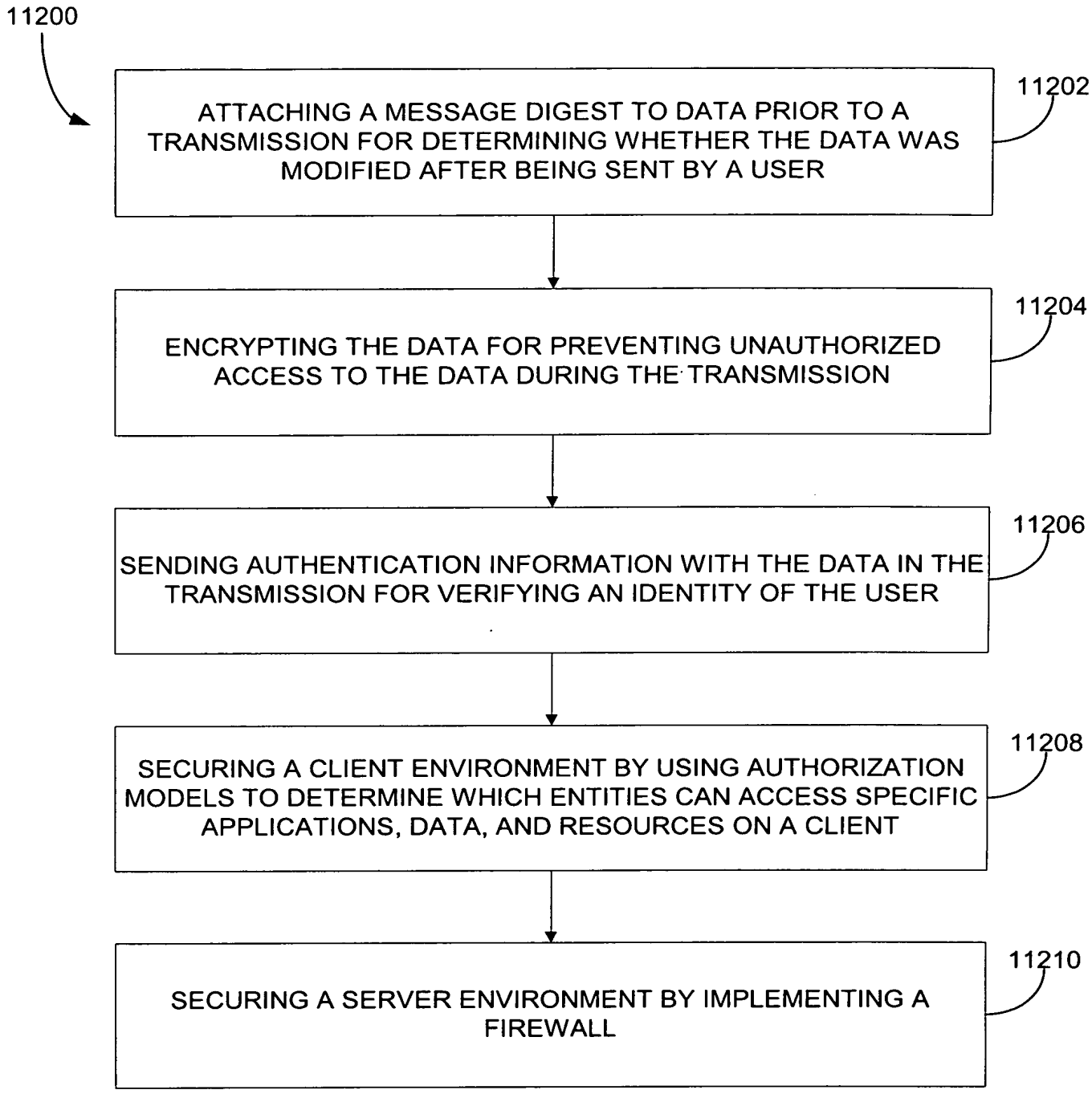

11200
ATTACHING A MESSAGE DIGEST TO DATA PRIOR TO A TRANSMISSION FOR DETERMINING WHETHER THE DATA WAS MODIFIED AFTER BEING SENT BY A USER
11202
ENCRYPTING THE DATA FOR PREVENTING UNAUTHORIZED ACCESS TO THE DATA DURING THE TRANSMISSION
11204
SENDING AUTHENTICATION INFORMATION WITH THE DATA IN THE TRANSMISSION FOR VERIFYING AN IDENTITY OF THE USER
11206
SECURING A CLIENT ENVIRONMENT BY USING AUTHORIZATION MODELS TO DETERMINE WHICH ENTITIES CAN ACCESS SPECIFIC APPLICATIONS, DATA, AND RESOURCES ON A CLIENT
11208
SECURING A SERVER ENVIRONMENT BY IMPLEMENTING A FIREWALL
11210

Figure 112

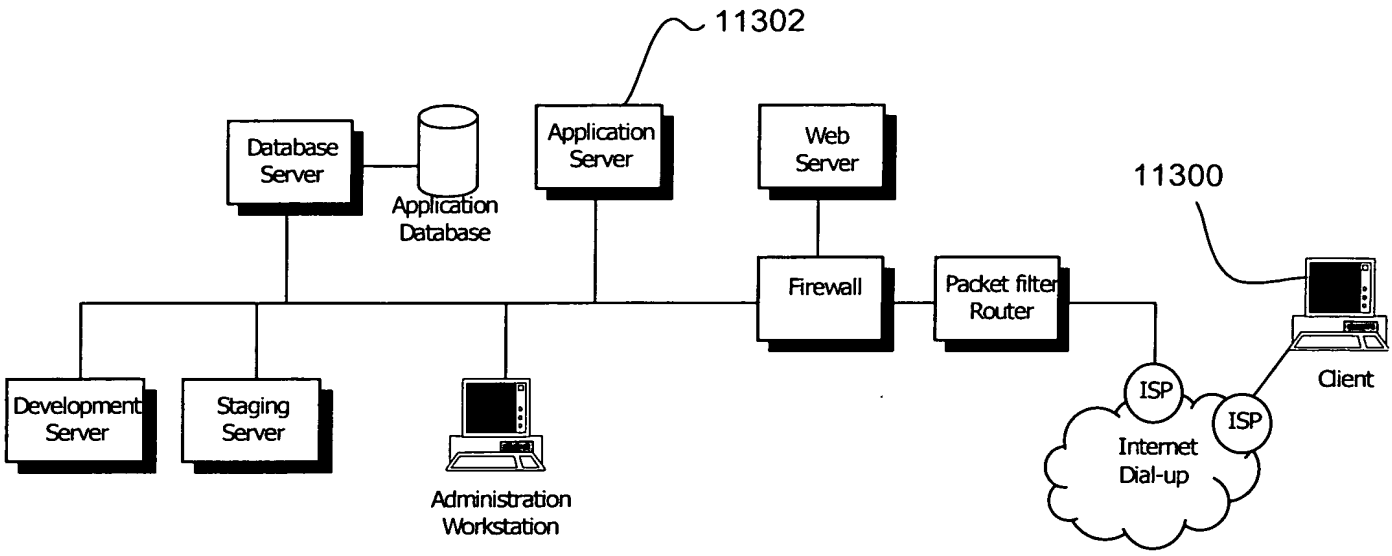


Figure 113

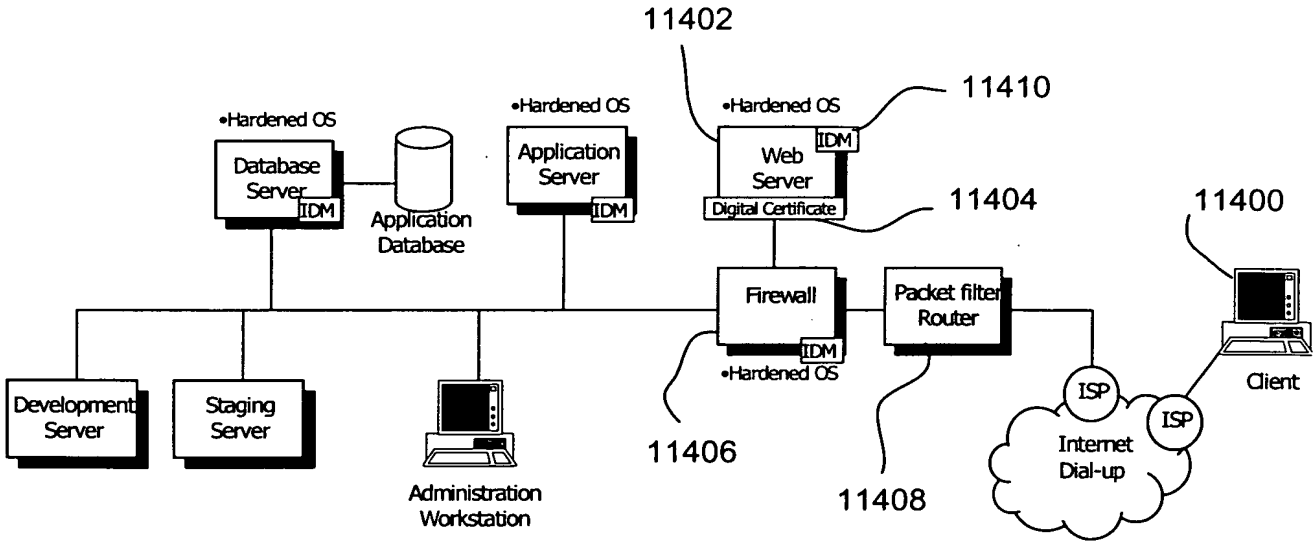


Figure 114

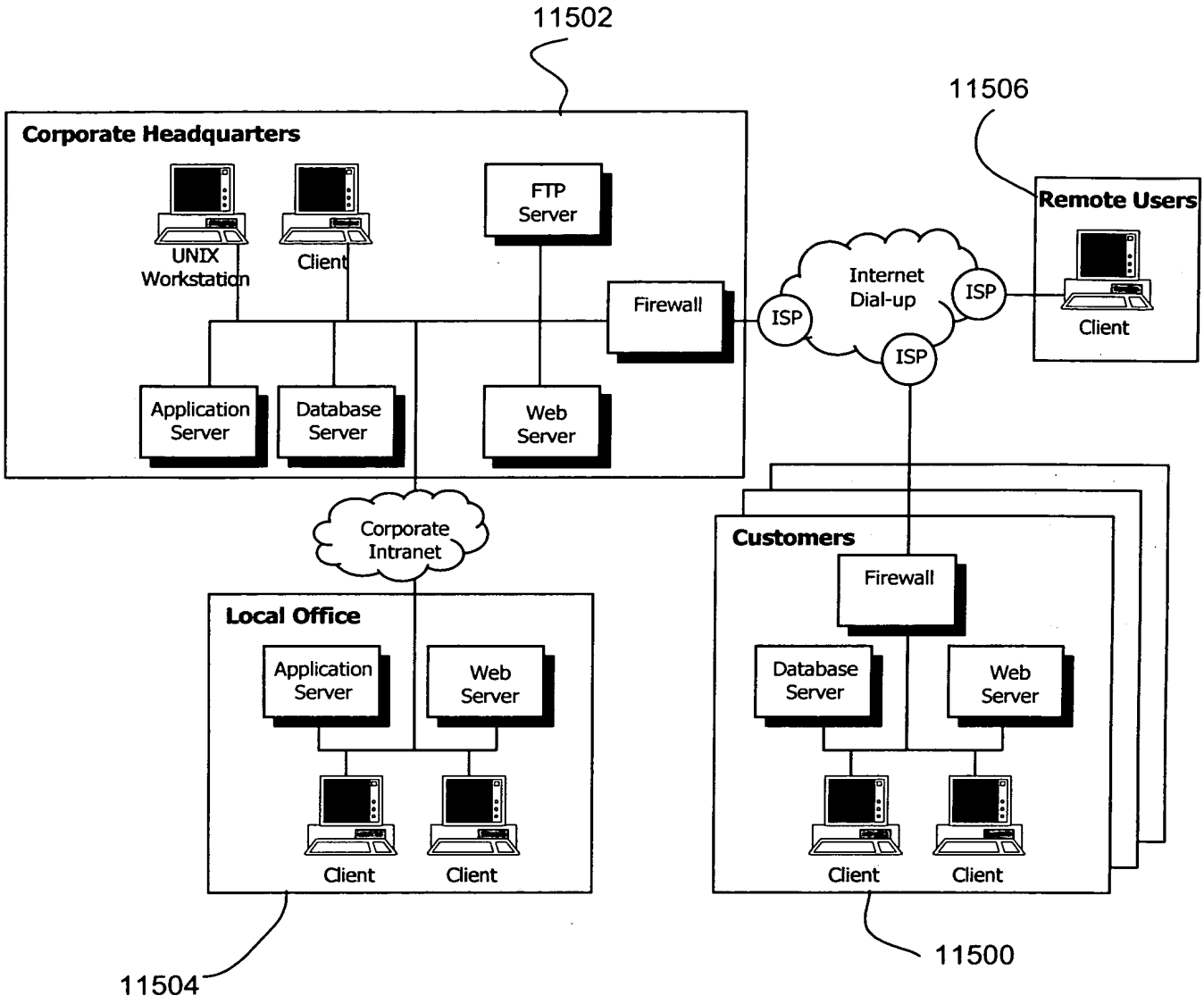

11502
11506
Corporate Headquarters
UNIX Workstation
Client
FTP Server
Firewall
Application Server
Database Server
Web Server
Internet Dial-up
ISP
ISP
ISP
Remote Users
Client
Corporate Intranet
Local Office
Application Server
Web Server
Client
Client
Customers
Firewall
Database Server
Web Server
Client
Client
11504
11500

Figure 115

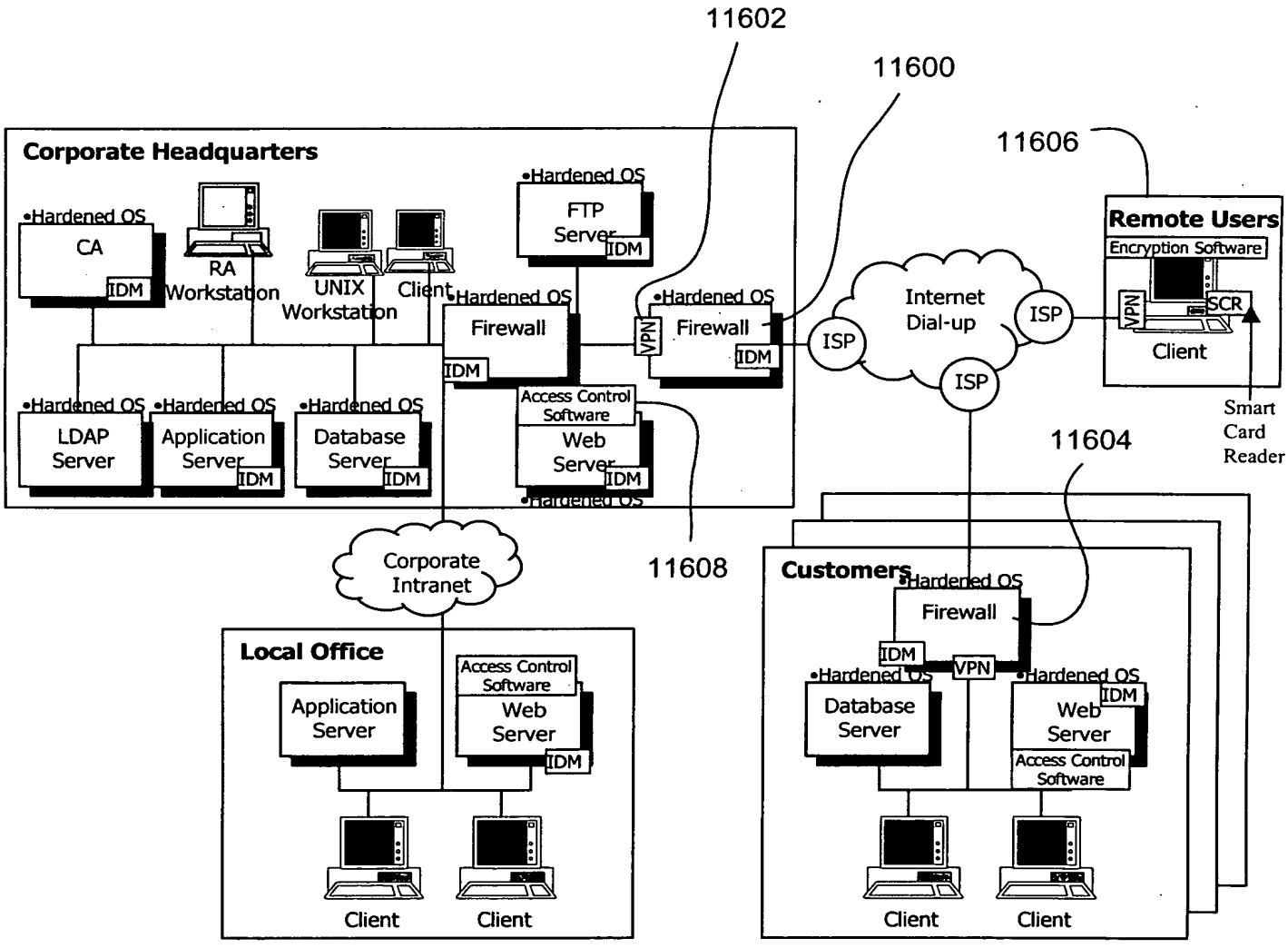

11602
11600
11606
Corporate Headquarters
•Hardened OS
CA
IDM
RA Workstation
UNIX Workstation
Client
•Hardened OS
FTP Server
IDM
•Hardened OS
Firewall
IDM
VPN
•Hardened OS
Firewall
IDM
Internet Dial-up
ISP
ISP
ISP
Remote Users
Encryption Software
VPN
SCR
Client
Smart Card Reader
•Hardened OS
LDAP Server
•Hardened OS
Application Server
IDM
•Hardened OS
Database Server
IDM
Access Control Software
Web Server
IDM
•Hardened OS
11604
11608
Corporate Intranet
Customers
•Hardened OS
Firewall
IDM
VPN
•Hardened OS
Database Server
•Hardened OS
Web Server
IDM
Access Control Software
Client
Client
Local Office
Application Server
Access Control Software
Web Server
IDM
Client
Client

Figure 116

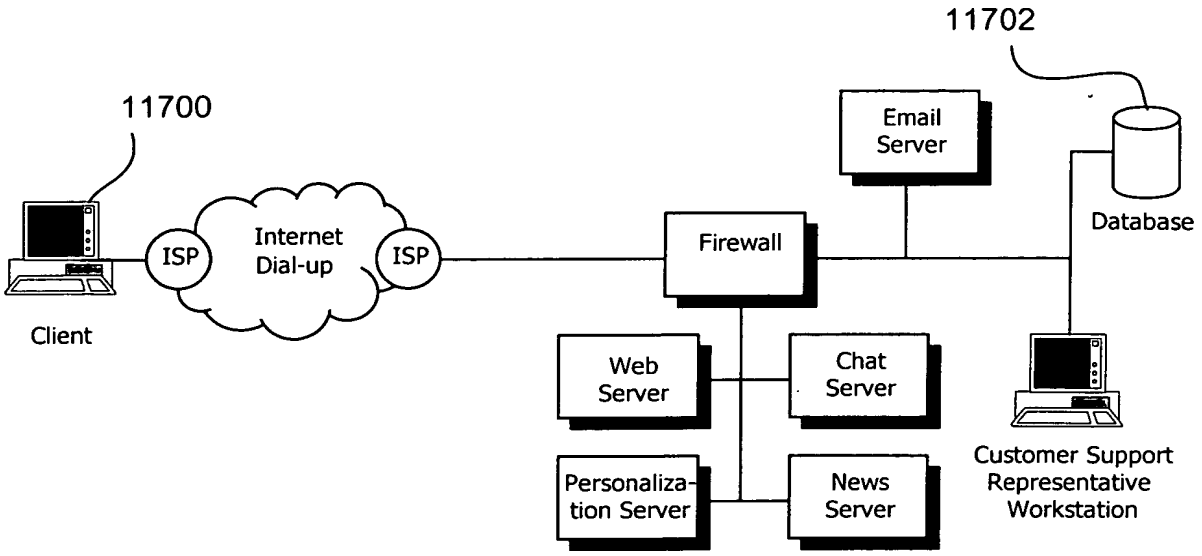


Figure 117

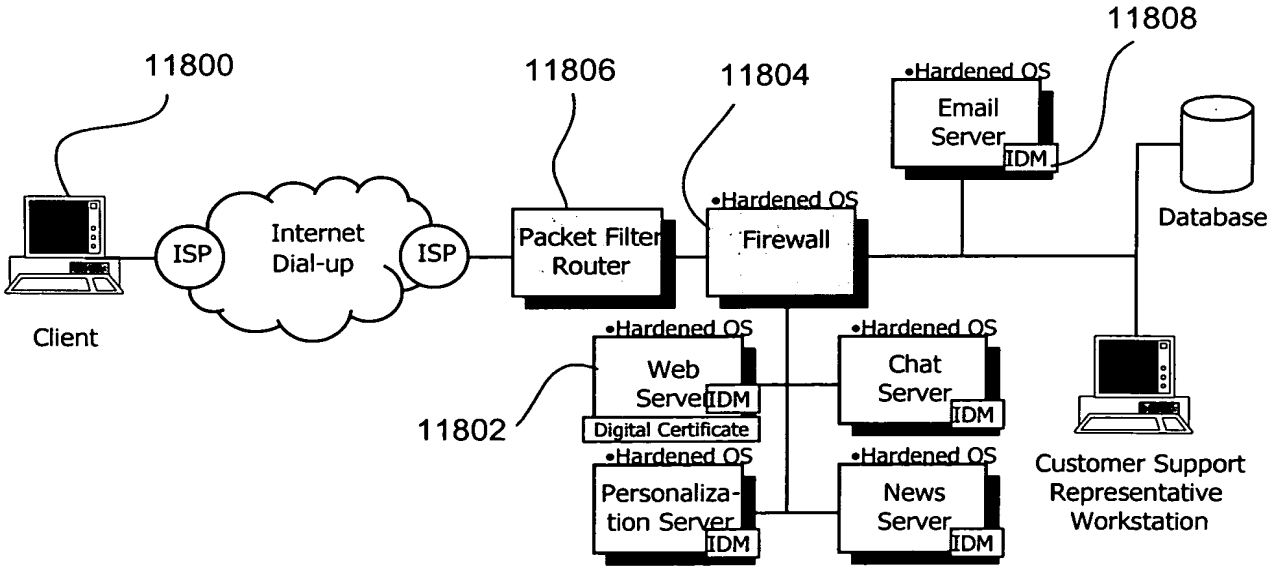


Figure 118

SUBSTITUTE SHEET (RULE 26)

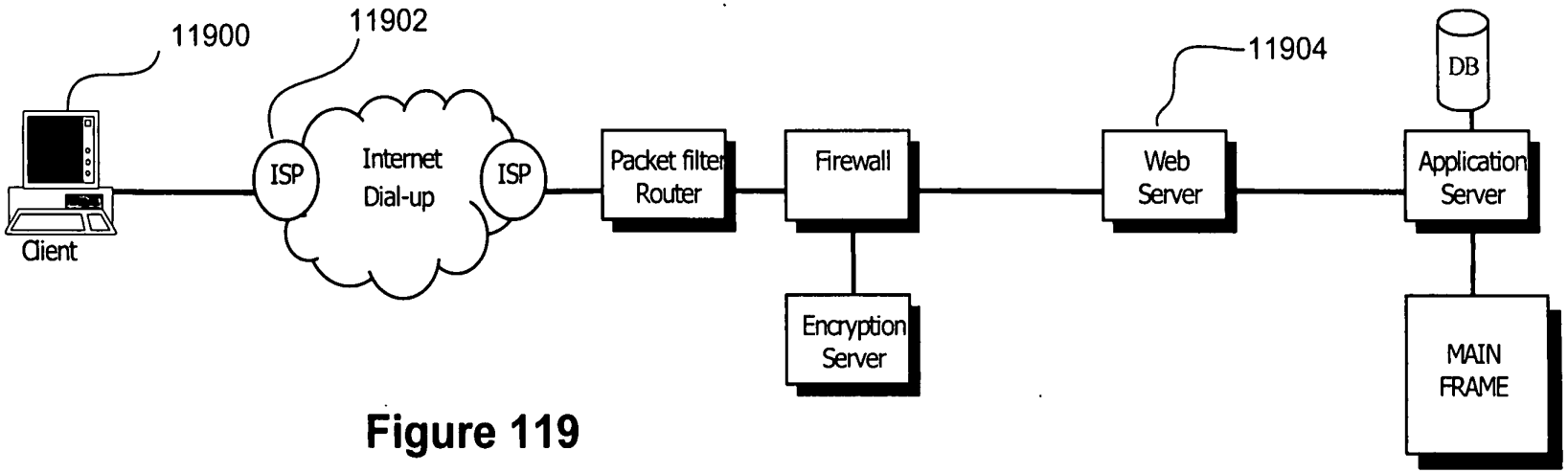


Figure 119

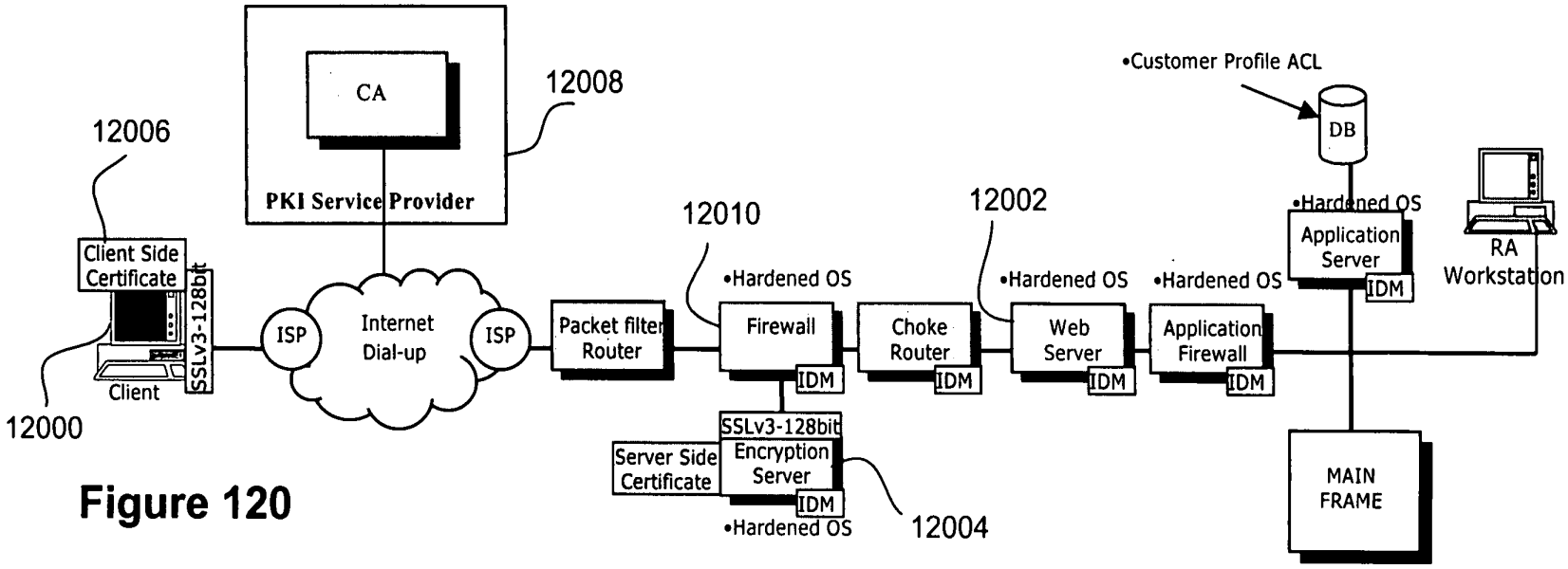


Figure 120

OBJECT DECLARED

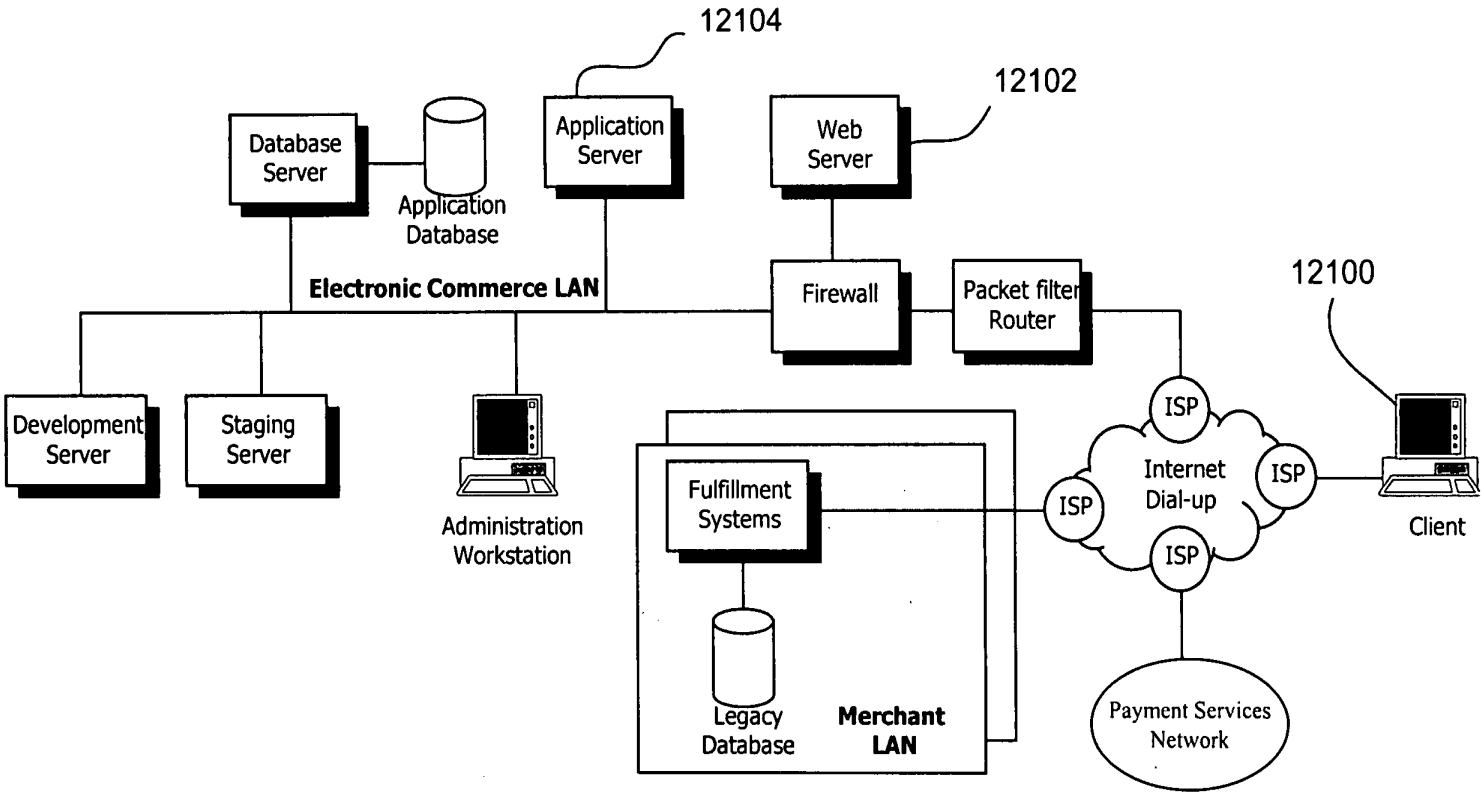


Figure 121

SUBSTITUTE SHEET (RULE 26)

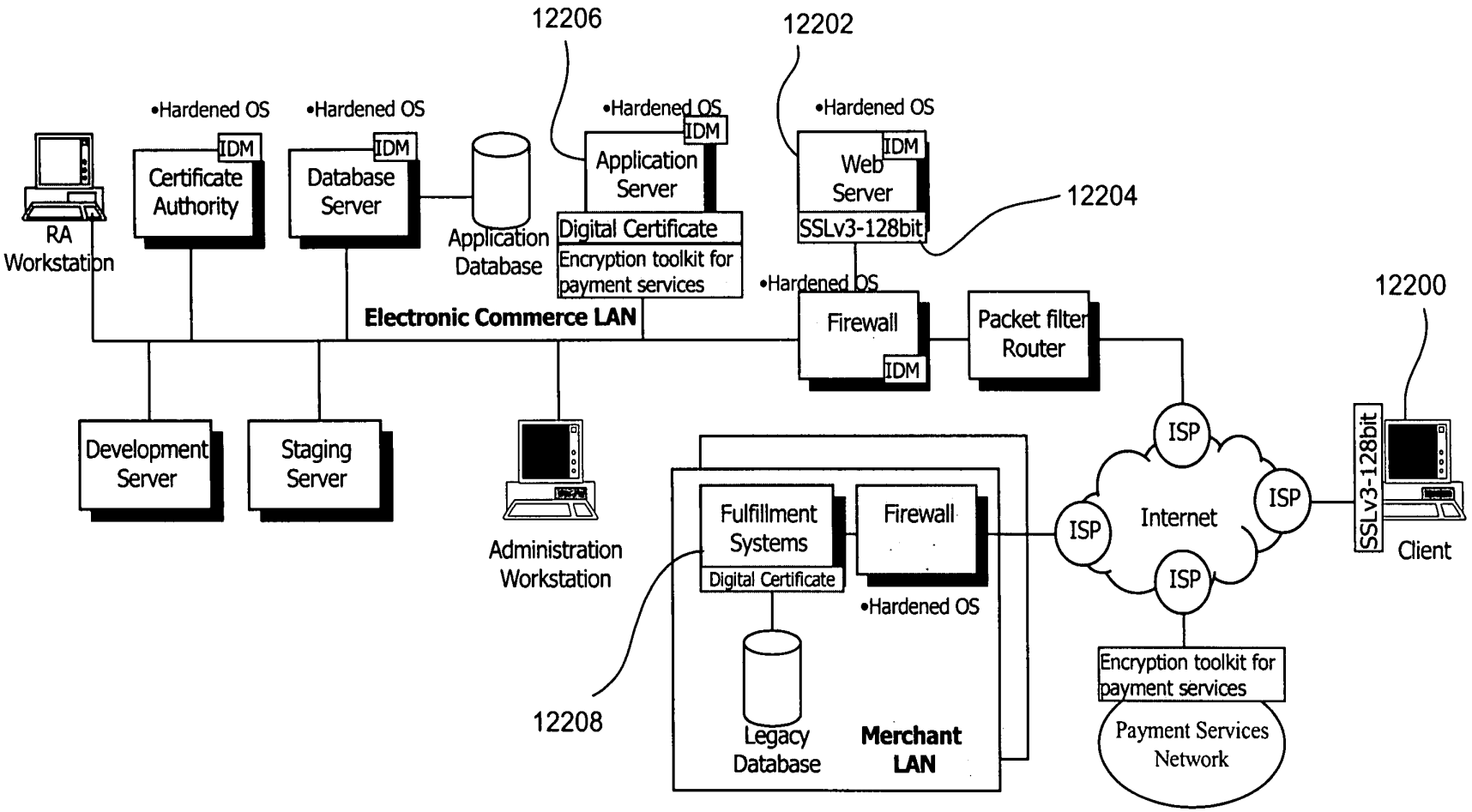


Figure 122

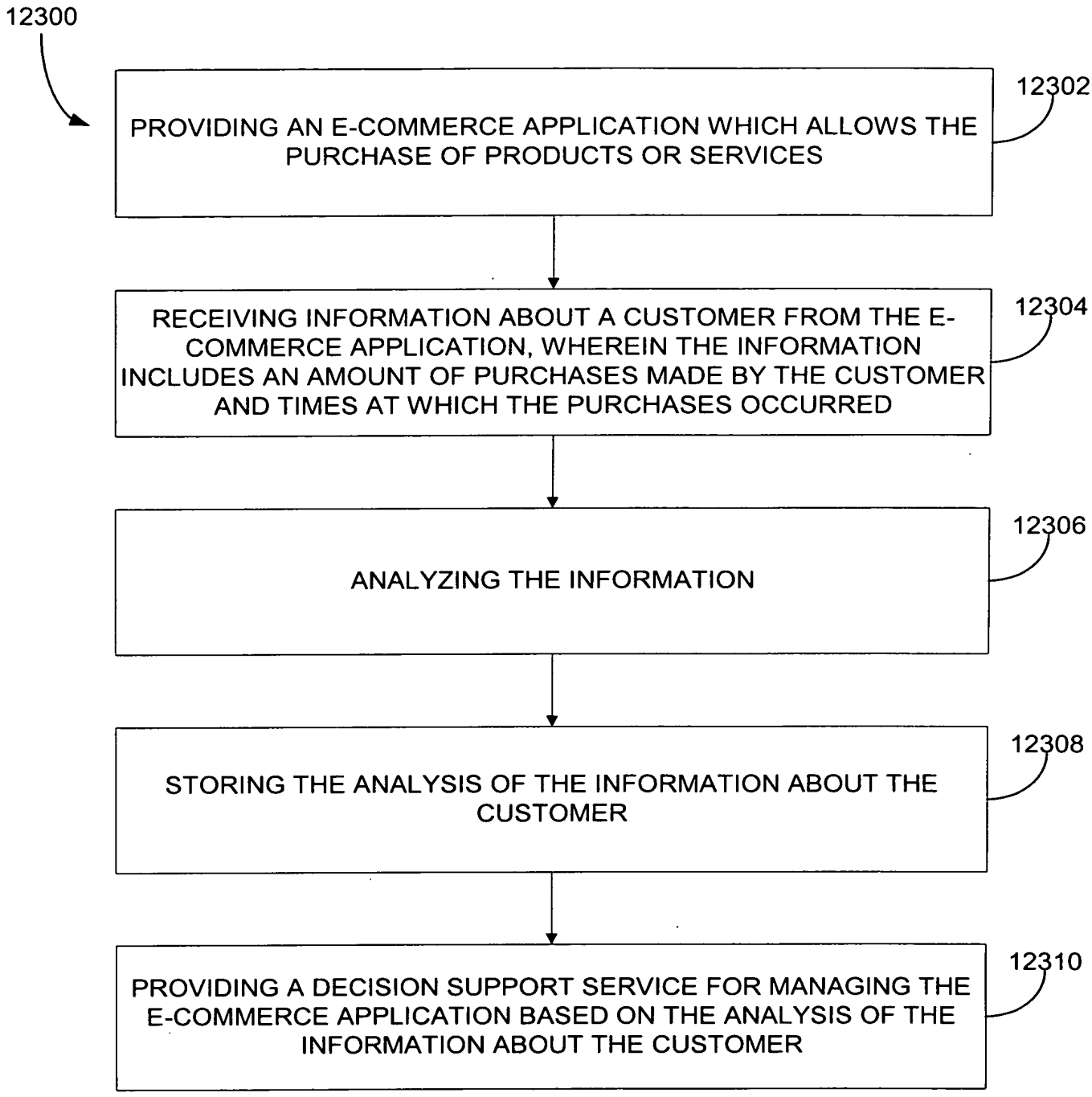

12300
PROVIDING AN E-COMMERCE APPLICATION WHICH ALLOWS THE PURCHASE OF PRODUCTS OR SERVICES
12302
RECEIVING INFORMATION ABOUT A CUSTOMER FROM THE E-COMMERCE APPLICATION, WHEREIN THE INFORMATION INCLUDES AN AMOUNT OF PURCHASES MADE BY THE CUSTOMER AND TIMES AT WHICH THE PURCHASES OCCURRED
12304
ANALYZING THE INFORMATION
12306
STORING THE ANALYSIS OF THE INFORMATION ABOUT THE CUSTOMER
12308
PROVIDING A DECISION SUPPORT SERVICE FOR MANAGING THE E-COMMERCE APPLICATION BASED ON THE ANALYSIS OF THE INFORMATION ABOUT THE CUSTOMER
12310

Figure 123

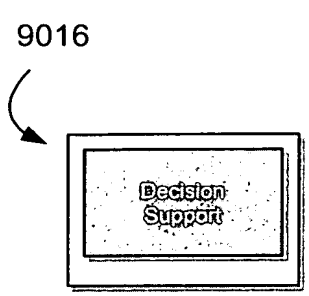


Figure 124

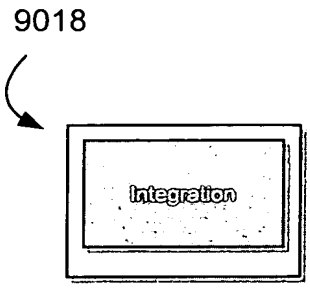


Figure 125

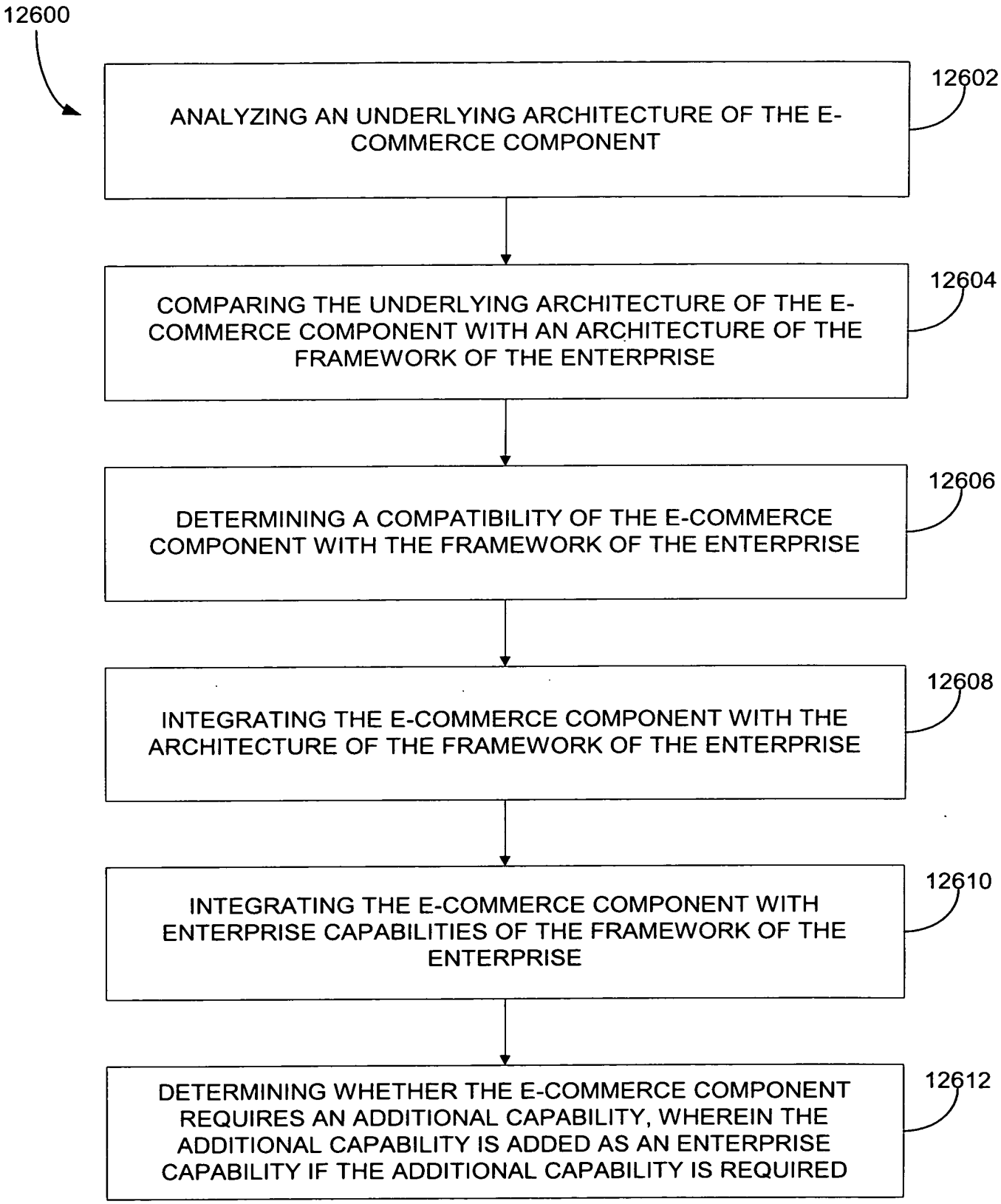

12600
ANALYZING AN UNDERLYING ARCHITECTURE OF THE E-COMMERCE COMPONENT
12602
COMPARING THE UNDERLYING ARCHITECTURE OF THE E-COMMERCE COMPONENT WITH AN ARCHITECTURE OF THE FRAMEWORK OF THE ENTERPRISE
12604
DETERMINING A COMPATIBILITY OF THE E-COMMERCE COMPONENT WITH THE FRAMEWORK OF THE ENTERPRISE
12606
INTEGRATING THE E-COMMERCE COMPONENT WITH THE ARCHITECTURE OF THE FRAMEWORK OF THE ENTERPRISE
12608
INTEGRATING THE E-COMMERCE COMPONENT WITH ENTERPRISE CAPABILITIES OF THE FRAMEWORK OF THE ENTERPRISE
12610
DETERMINING WHETHER THE E-COMMERCE COMPONENT REQUIRES AN ADDITIONAL CAPABILITY, WHEREIN THE ADDITIONAL CAPABILITY IS ADDED AS AN ENTERPRISE CAPABILITY IF THE ADDITIONAL CAPABILITY IS REQUIRED
12612

Figure 126

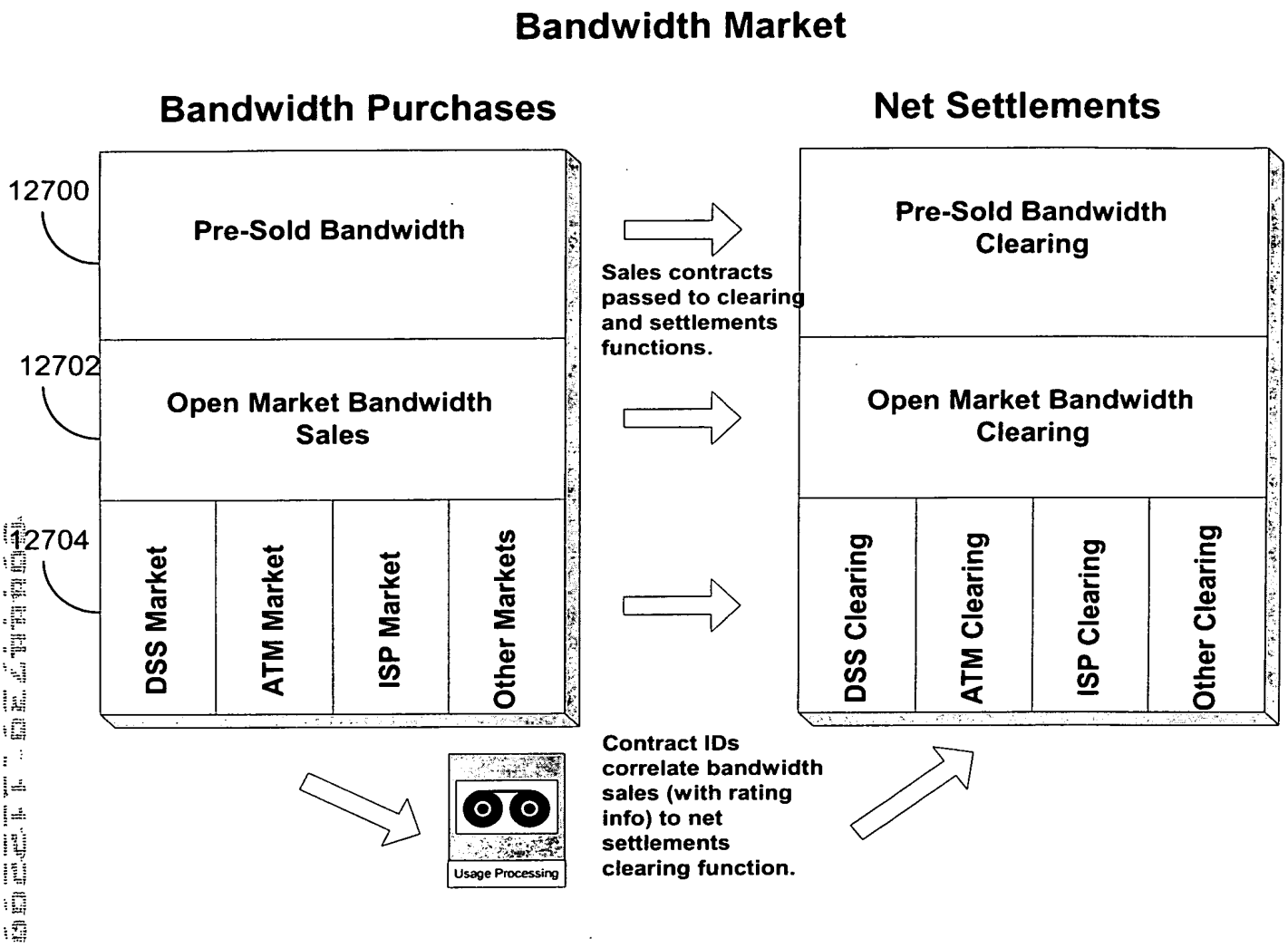

Bandwidth Market
Bandwidth Purchases
Net Settlements
12700
Pre-Sold Bandwidth
12702
Open Market Bandwidth Sales
12704
DSS Market
ATM Market
ISP Market
Other Markets
Sales contracts passed to clearing and settlements functions.
Pre-Sold Bandwidth Clearing
Open Market Bandwidth Clearing
DSS Clearing
ATM Clearing
ISP Clearing
Other Clearing
Usage Processing
Contract IDs correlate bandwidth sales (with rating info) to net settlements clearing function.

Figure 127

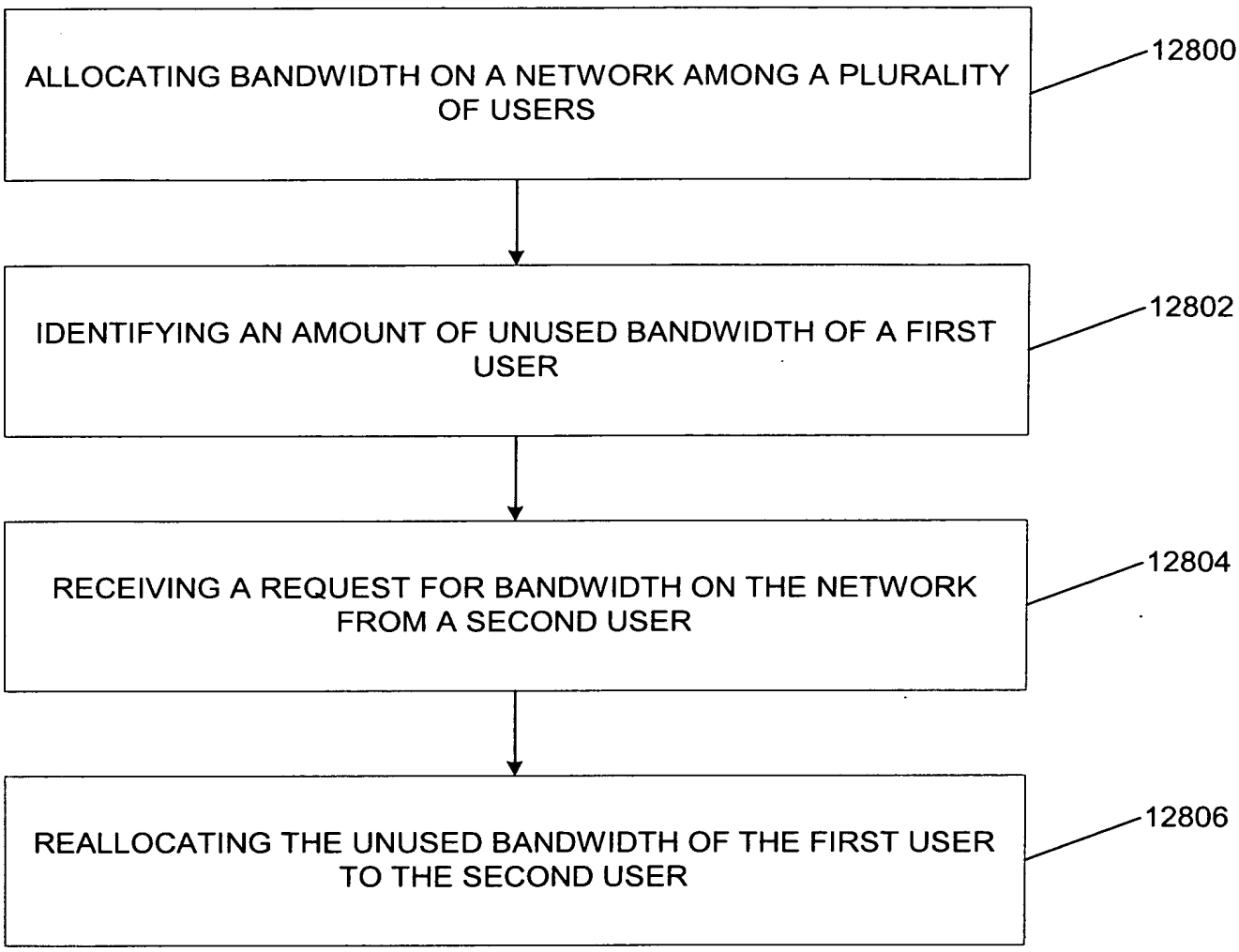

ALLOCATING BANDWIDTH ON A NETWORK AMONG A PLURALITY OF USERS
12800
IDENTIFYING AN AMOUNT OF UNUSED BANDWIDTH OF A FIRST USER
12802
RECEIVING A REQUEST FOR BANDWIDTH ON THE NETWORK FROM A SECOND USER
12804
REALLOCATING THE UNUSED BANDWIDTH OF THE FIRST USER TO THE SECOND USER
12806

Figure 128

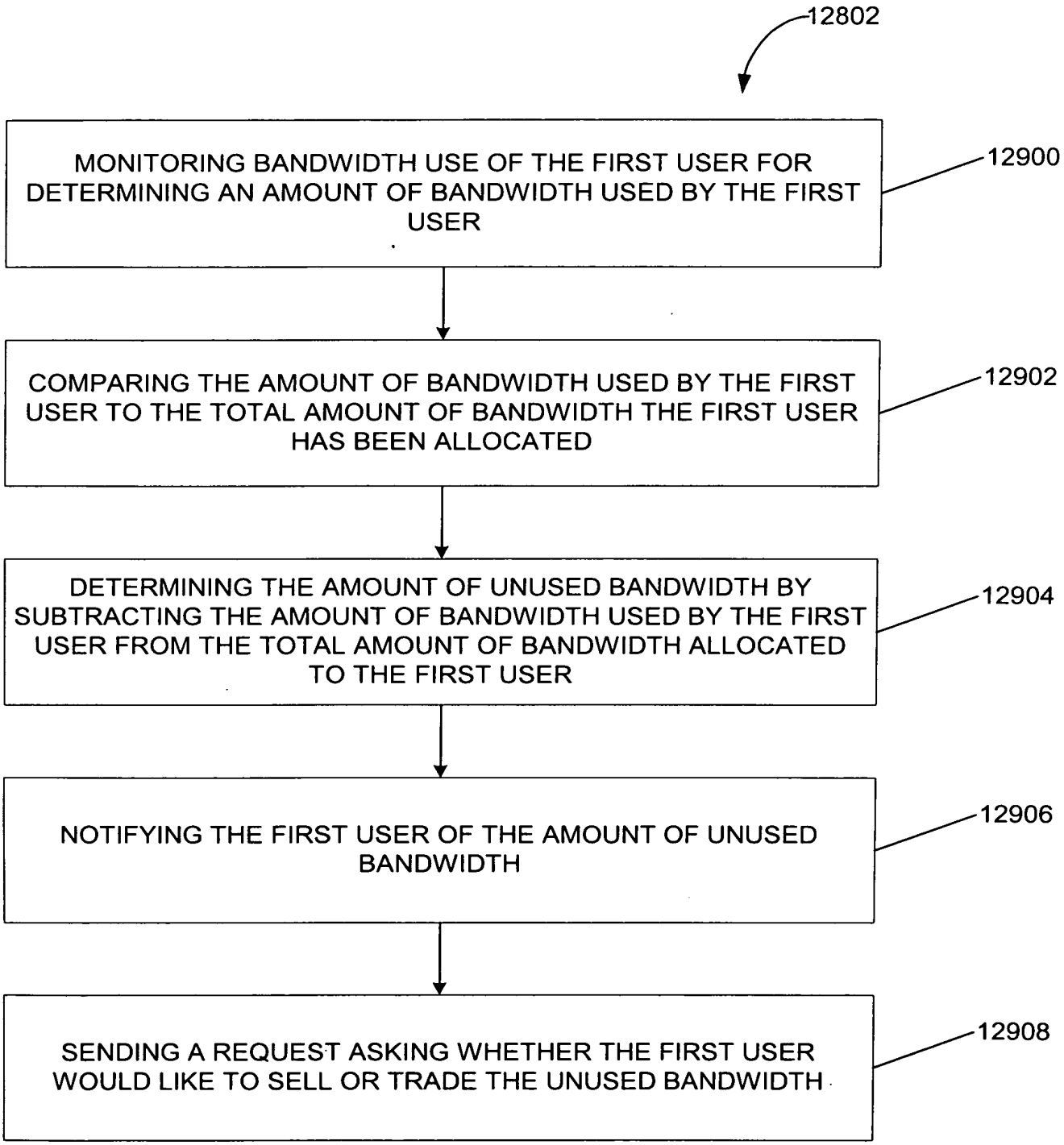

12802
MONITORING BANDWIDTH USE OF THE FIRST USER FOR DETERMINING AN AMOUNT OF BANDWIDTH USED BY THE FIRST USER
12900
COMPARING THE AMOUNT OF BANDWIDTH USED BY THE FIRST USER TO THE TOTAL AMOUNT OF BANDWIDTH THE FIRST USER HAS BEEN ALLOCATED
12902
DETERMINING THE AMOUNT OF UNUSED BANDWIDTH BY SUBTRACTING THE AMOUNT OF BANDWIDTH USED BY THE FIRST USER FROM THE TOTAL AMOUNT OF BANDWIDTH ALLOCATED TO THE FIRST USER
12904
NOTIFYING THE FIRST USER OF THE AMOUNT OF UNUSED BANDWIDTH
12906
SENDING A REQUEST ASKING WHETHER THE FIRST USER WOULD LIKE TO SELL OR TRADE THE UNUSED BANDWIDTH
12908

Figure 129

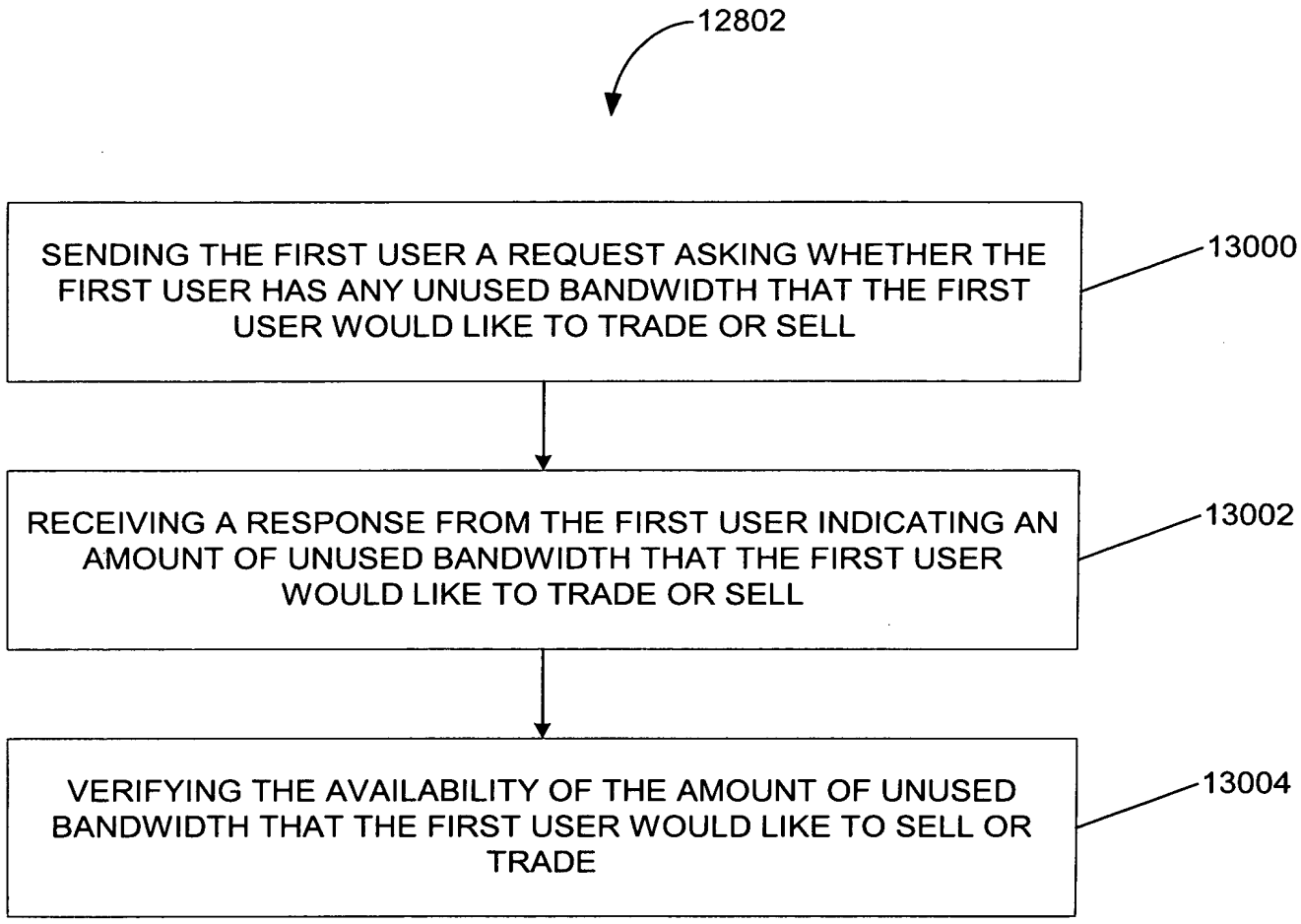

12802
SENDING THE FIRST USER A REQUEST ASKING WHETHER THE FIRST USER HAS ANY UNUSED BANDWIDTH THAT THE FIRST USER WOULD LIKE TO TRADE OR SELL
13000
RECEIVING A RESPONSE FROM THE FIRST USER INDICATING AN AMOUNT OF UNUSED BANDWIDTH THAT THE FIRST USER WOULD LIKE TO TRADE OR SELL
13002
VERIFYING THE AVAILABILITY OF THE AMOUNT OF UNUSED BANDWIDTH THAT THE FIRST USER WOULD LIKE TO SELL OR TRADE
13004

Figure 130

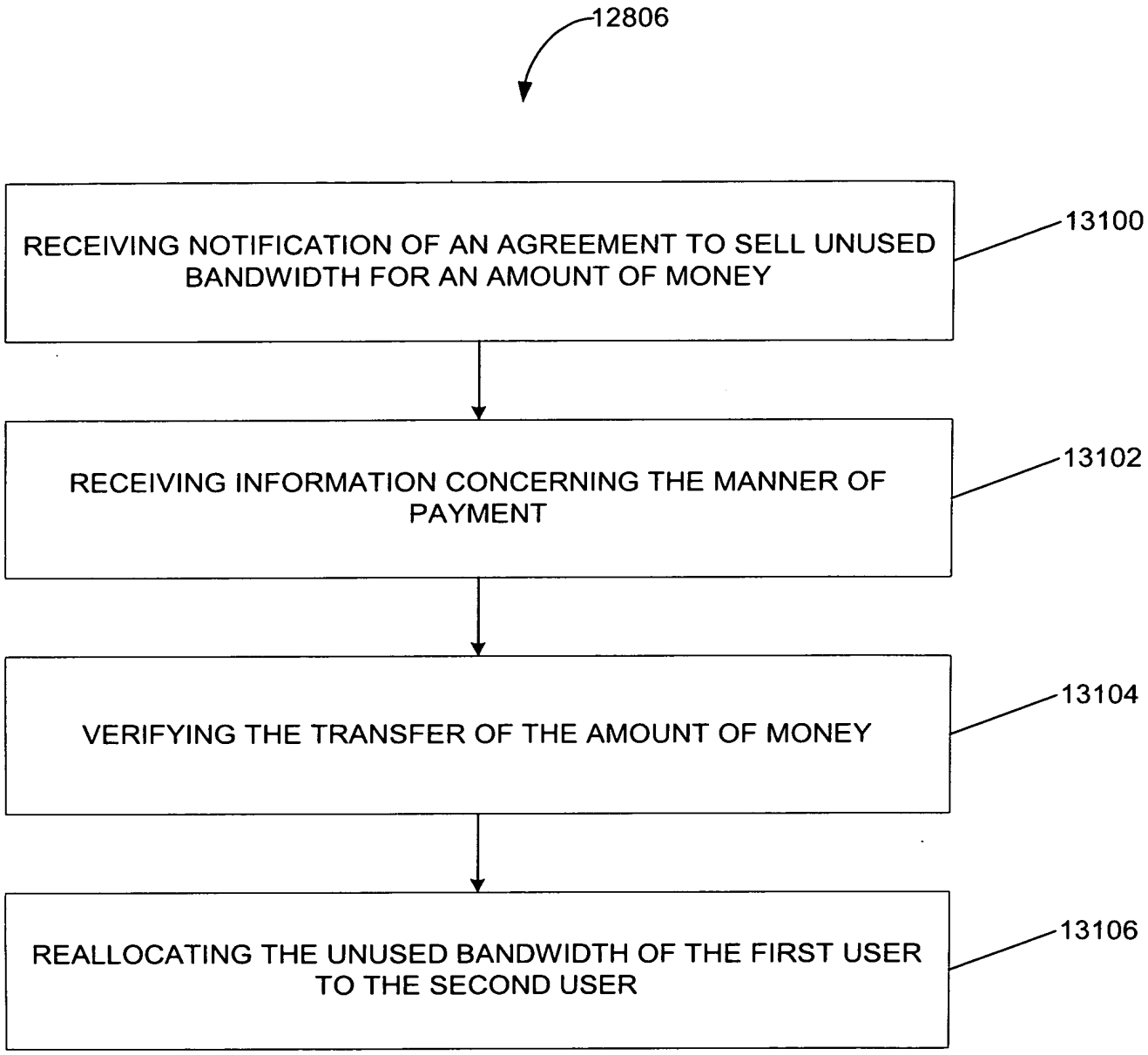

12806
RECEIVING NOTIFICATION OF AN AGREEMENT TO SELL UNUSED BANDWIDTH FOR AN AMOUNT OF MONEY
13100
RECEIVING INFORMATION CONCERNING THE MANNER OF PAYMENT
13102
VERIFYING THE TRANSFER OF THE AMOUNT OF MONEY
13104
REALLOCATING THE UNUSED BANDWIDTH OF THE FIRST USER TO THE SECOND USER
13106

Figure 131

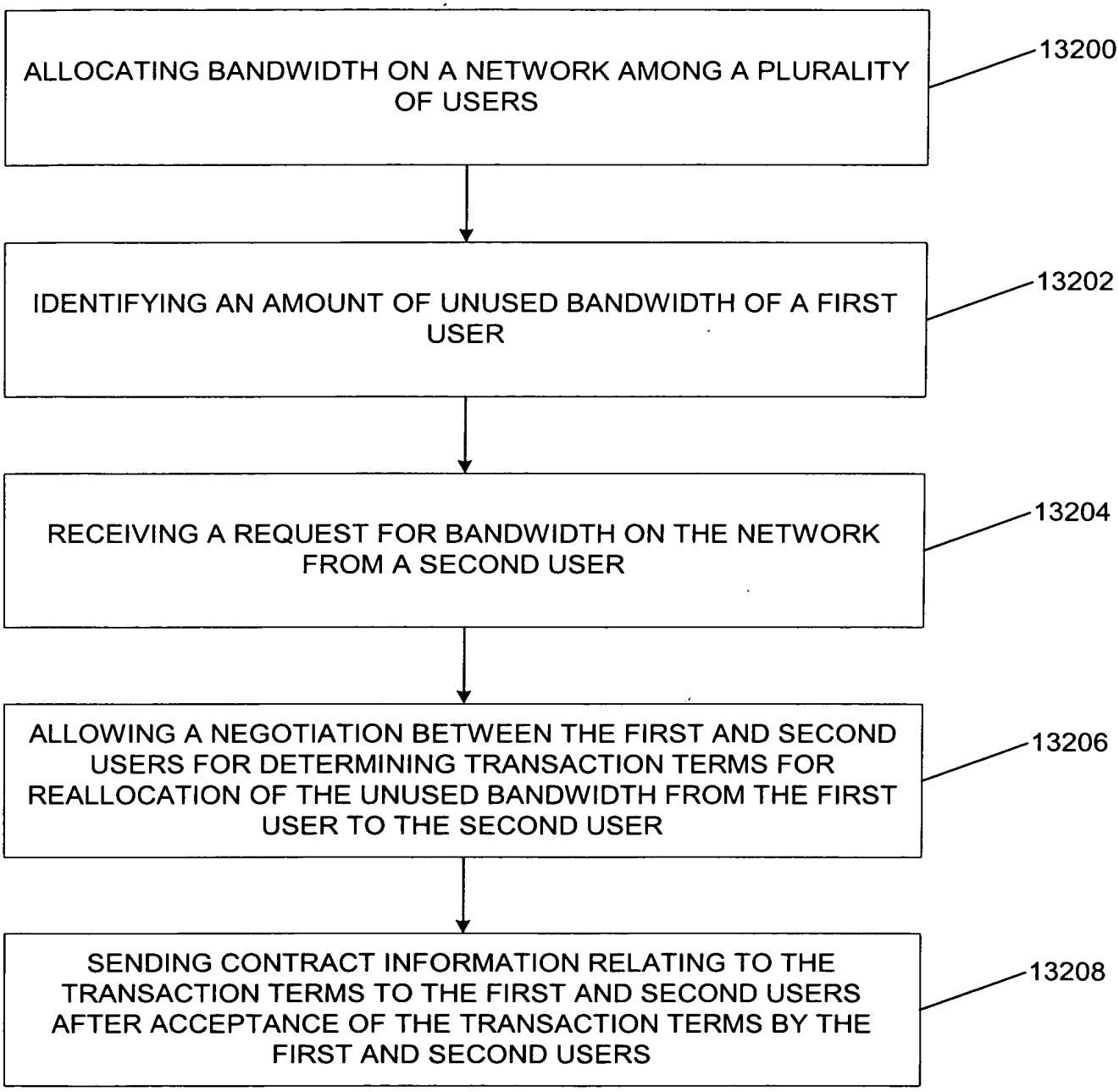

ALLOCATING BANDWIDTH ON A NETWORK AMONG A PLURALITY OF USERS
13200
IDENTIFYING AN AMOUNT OF UNUSED BANDWIDTH OF A FIRST USER
13202
RECEIVING A REQUEST FOR BANDWIDTH ON THE NETWORK FROM A SECOND USER
13204
ALLOWING A NEGOTIATION BETWEEN THE FIRST AND SECOND USERS FOR DETERMINING TRANSACTION TERMS FOR REALLOCATION OF THE UNUSED BANDWIDTH FROM THE FIRST USER TO THE SECOND USER
13206
SENDING CONTRACT INFORMATION RELATING TO THE TRANSACTION TERMS TO THE FIRST AND SECOND USERS AFTER ACCEPTANCE OF THE TRANSACTION TERMS BY THE FIRST AND SECOND USERS
13208

Figure 132

Bandwidth Contract Flow

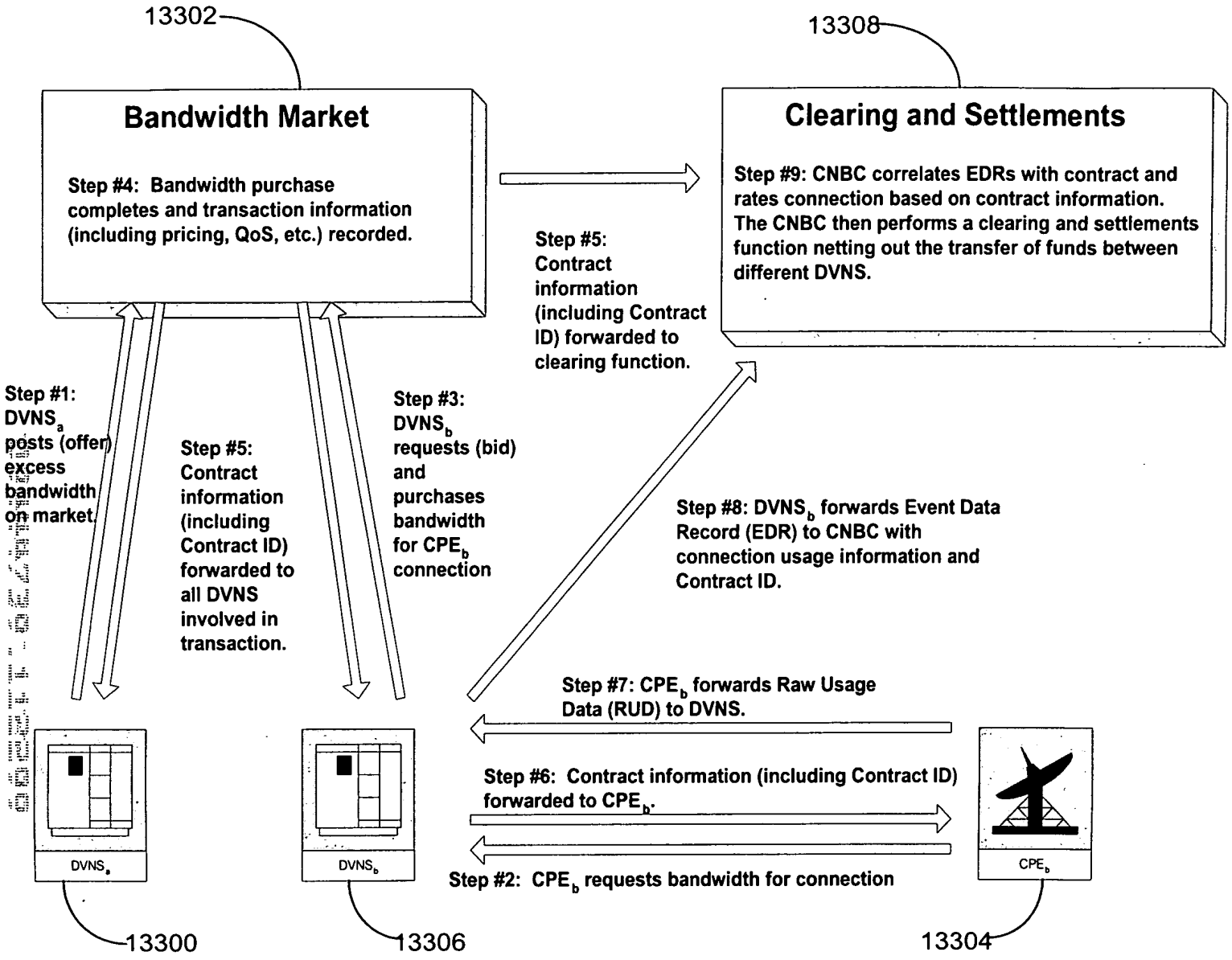


Figure 133

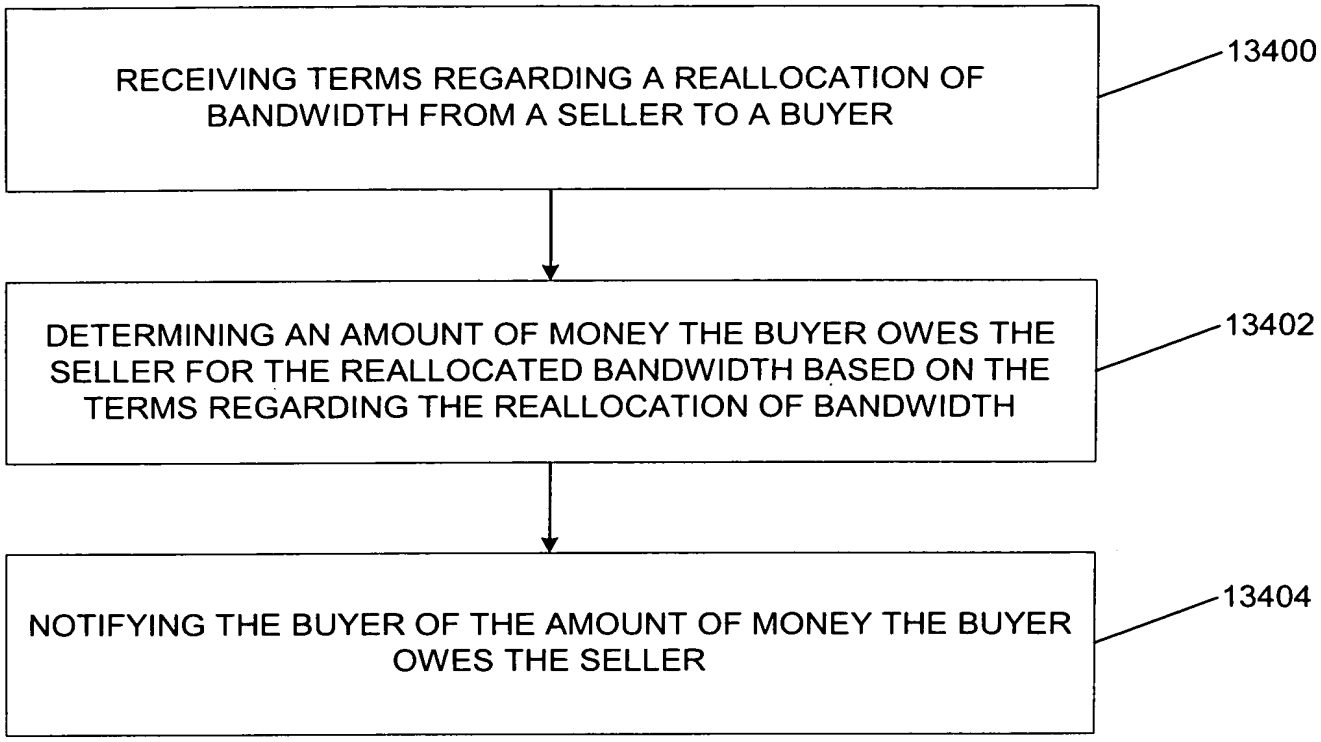

RECEIVING TERMS REGARDING A REALLOCATION OF BANDWIDTH FROM A SELLER TO A BUYER
13400
DETERMINING AN AMOUNT OF MONEY THE BUYER OWES THE SELLER FOR THE REALLOCATED BANDWIDTH BASED ON THE TERMS REGARDING THE REALLOCATION OF BANDWIDTH
13402
NOTIFYING THE BUYER OF THE AMOUNT OF MONEY THE BUYER OWES THE SELLER
13404

Figure 134

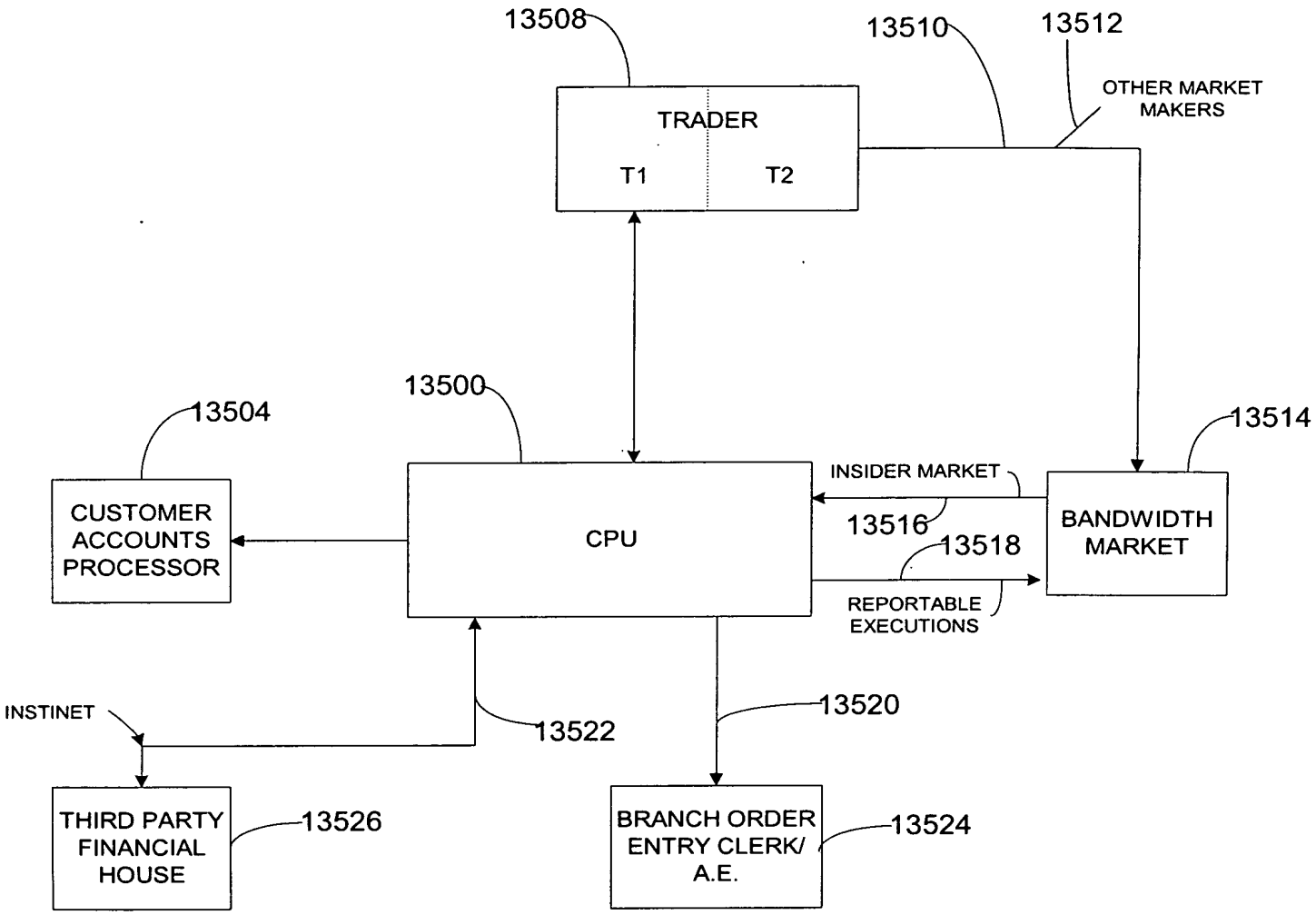

13508
13510
13512
OTHER MARKET MAKERS
TRADER
T1
T2
13500
13504
13514
CUSTOMER ACCOUNTS PROCESSOR
CPU
INSIDER MARKET
13516
13518
BANDWIDTH MARKET
REPORTABLE EXECUTIONS
INSTINET
13522
13520
THIRD PARTY FINANCIAL HOUSE
13526
BRANCH ORDER ENTRY CLERK/ A.E.
13524

Figure 135

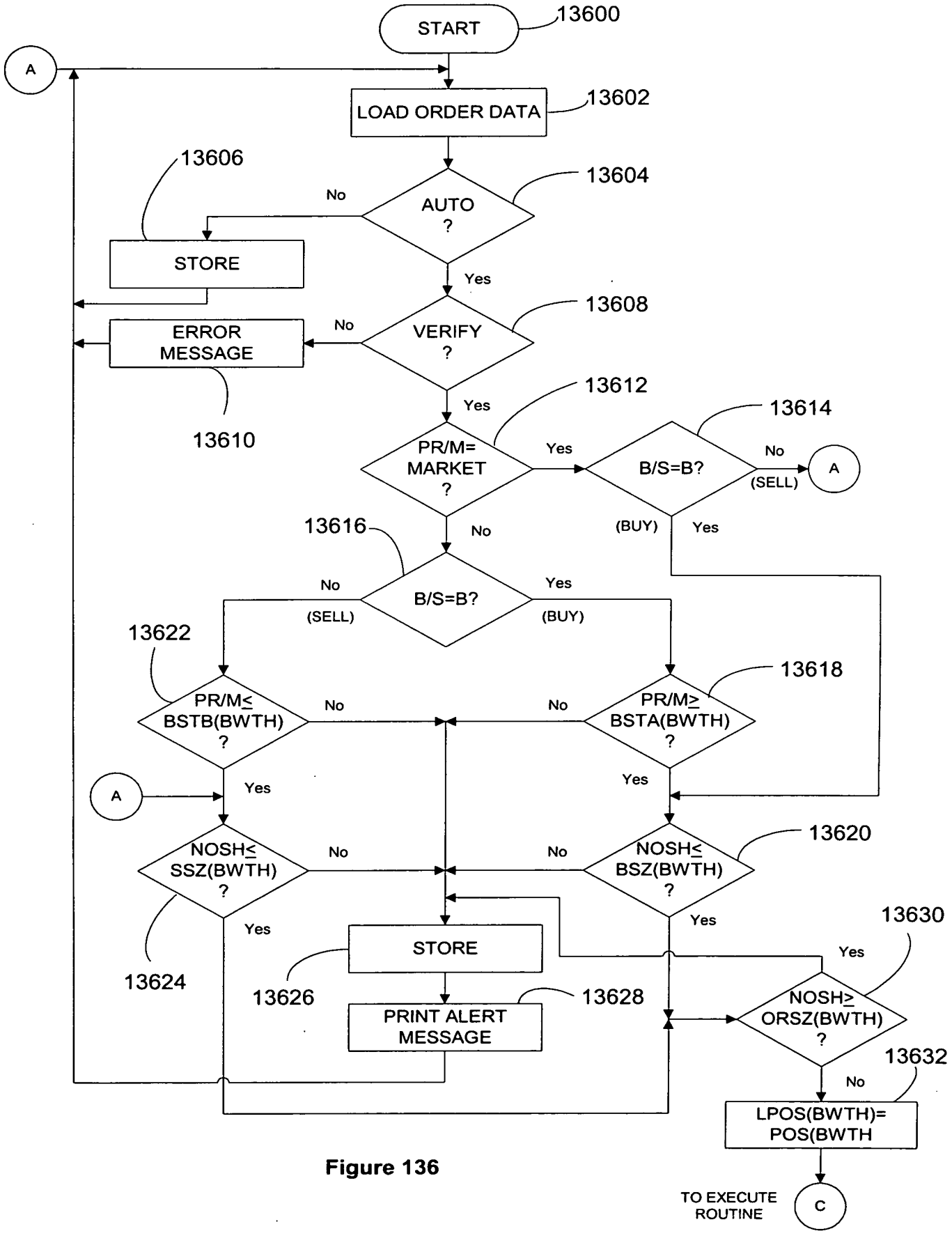

START
13600
A
LOAD ORDER DATA
13602
13606
13604
No
AUTO
?
STORE
Yes
13608
No
VERIFY
?
ERROR
MESSAGE
13610
Yes
13612
13614
PR/M=
MARKET
?
Yes
B/S=B?
No
(SELL)
A
(BUY)
Yes
13616
No
No
B/S=B?
Yes
(SELL)
(BUY)
13622
13618
PR/M≤
BSTB(BWTH)
?
No
No
PR/M≥
BSTA(BWTH)
?
A
Yes
Yes
NOSH≤
SSZ(BWTH)
?
No
No
NOSH≤
BSZ(BWTH)
?
13620
Yes
Yes
13630
13624
STORE
13626
13628
PRINT ALERT
MESSAGE
NOSH≥
ORSZ(BWTH)
?
13632
No
LPOS(BWTH)=
POS(BWTH
TO EXECUTE
ROUTINE
C

Figure 136

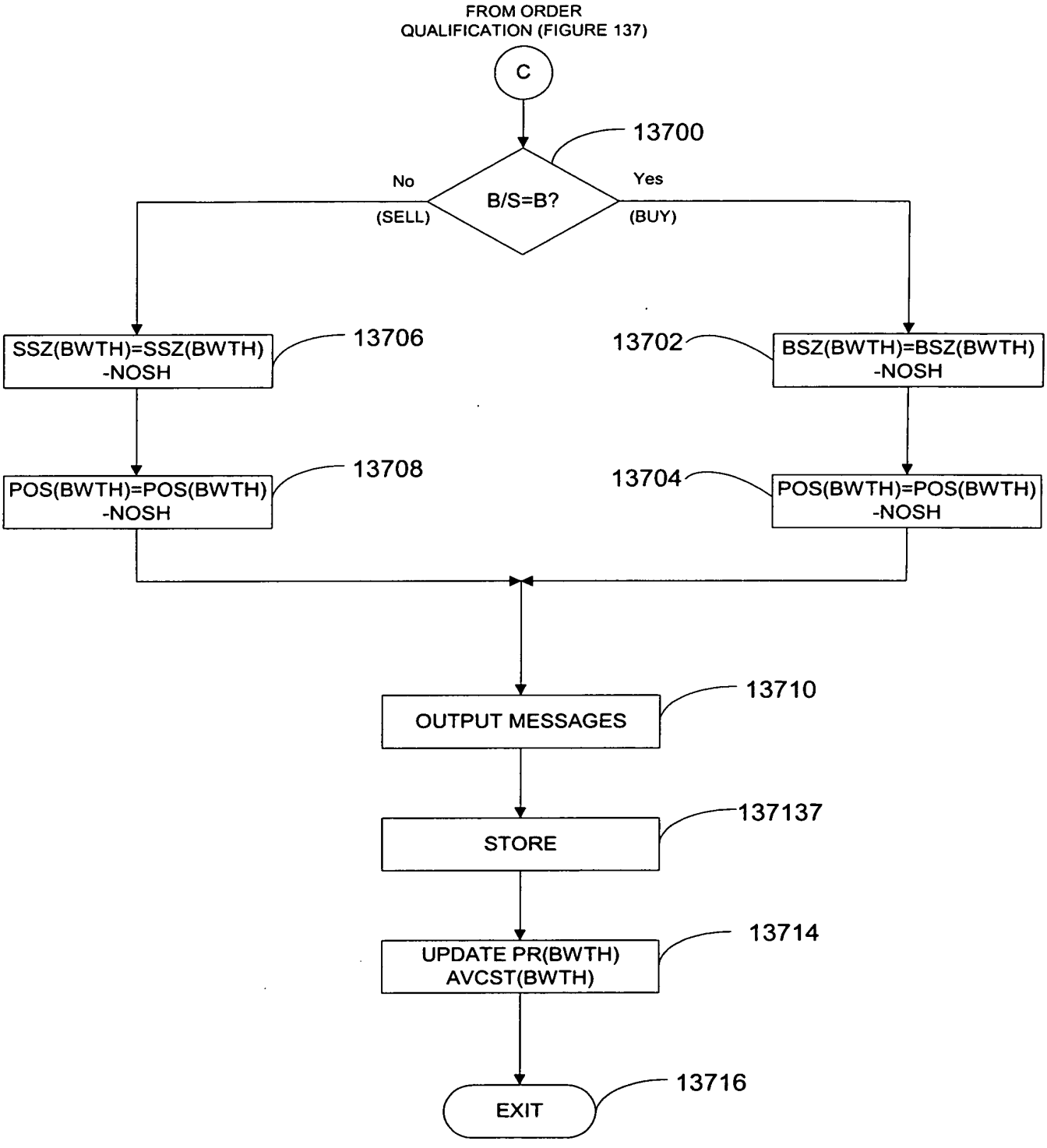

FROM ORDER
QUALIFICATION (FIGURE 137)
C
13700
B/S=B?
No
(SELL)
Yes
(BUY)
SSZ(BWTH)=SSZ(BWTH)
-NOSH
13706
13702
BSZ(BWTH)=BSZ(BWTH)
-NOSH
POS(BWTH)=POS(BWTH)
-NOSH
13708
13704
POS(BWTH)=POS(BWTH)
-NOSH
OUTPUT MESSAGES
13710
STORE
137137
UPDATE PR(BWTH)
AVCST(BWTH)
13714
EXIT
13716

Figure 137

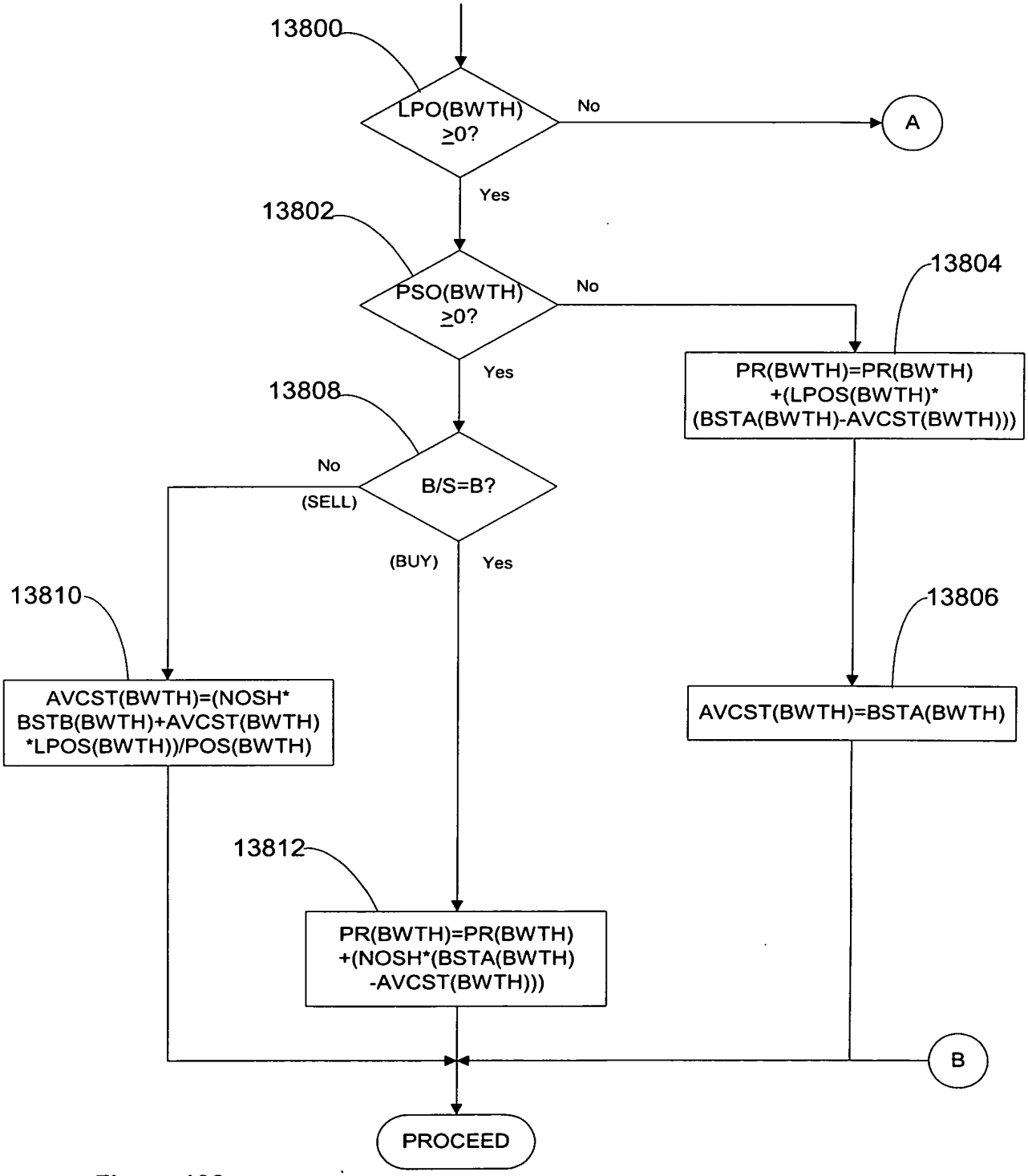

13800
LPO(BWTH) ≥0?
No
A
Yes
13802
PSO(BWTH) ≥0?
No
13804
PR(BWTH)=PR(BWTH) +(LPOS(BWTH)* (BSTA(BWTH)-AVCST(BWTH)))
Yes
13808
B/S=B?
No
(SELL)
(BUY)
Yes
13810
AVCST(BWTH)=(NOSH* BSTB(BWTH)+AVCST(BWTH) *LPOS(BWTH))/POS(BWTH)
13806
AVCST(BWTH)=BSTA(BWTH)
13812
PR(BWTH)=PR(BWTH) +(NOSH*(BSTA(BWTH) -AVCST(BWTH)))
B
PROCEED

Figure 138

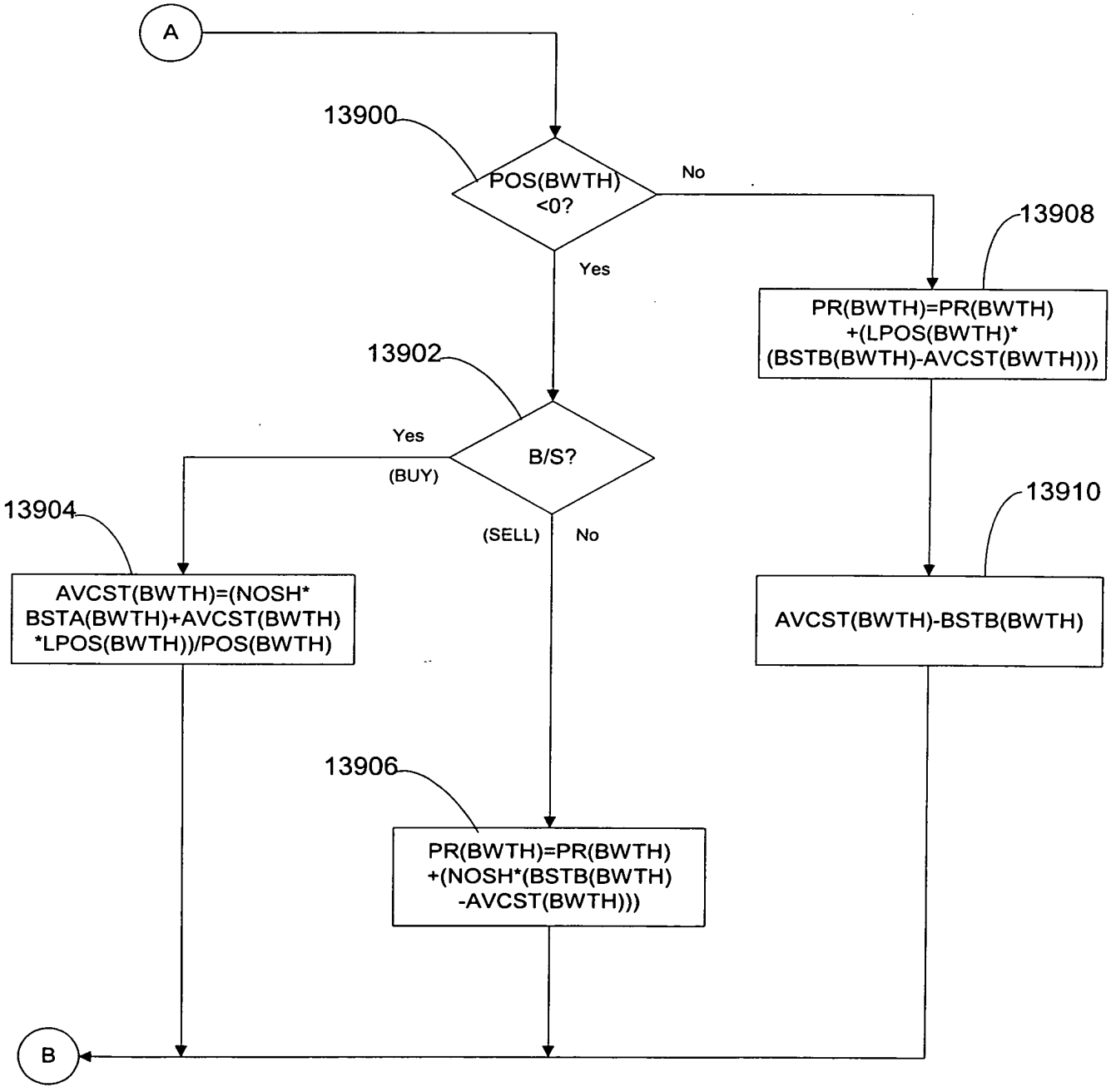

A
13900
POS(BWTH)
<0?
No
Yes
13908
PR(BWTH)=PR(BWTH)
+(LPOS(BWTH)*
(BSTB(BWTH)-AVCST(BWTH)))
13902
B/S?
Yes
(BUY)
(SELL)
No
13904
AVCST(BWTH)=(NOSH*
BSTA(BWTH)+AVCST(BWTH)
*LPOS(BWTH))/POS(BWTH)
13910
AVCST(BWTH)-BSTB(BWTH)
13906
PR(BWTH)=PR(BWTH)
+(NOSH*(BSTB(BWTH)
-AVCST(BWTH)))
B

Figure 139

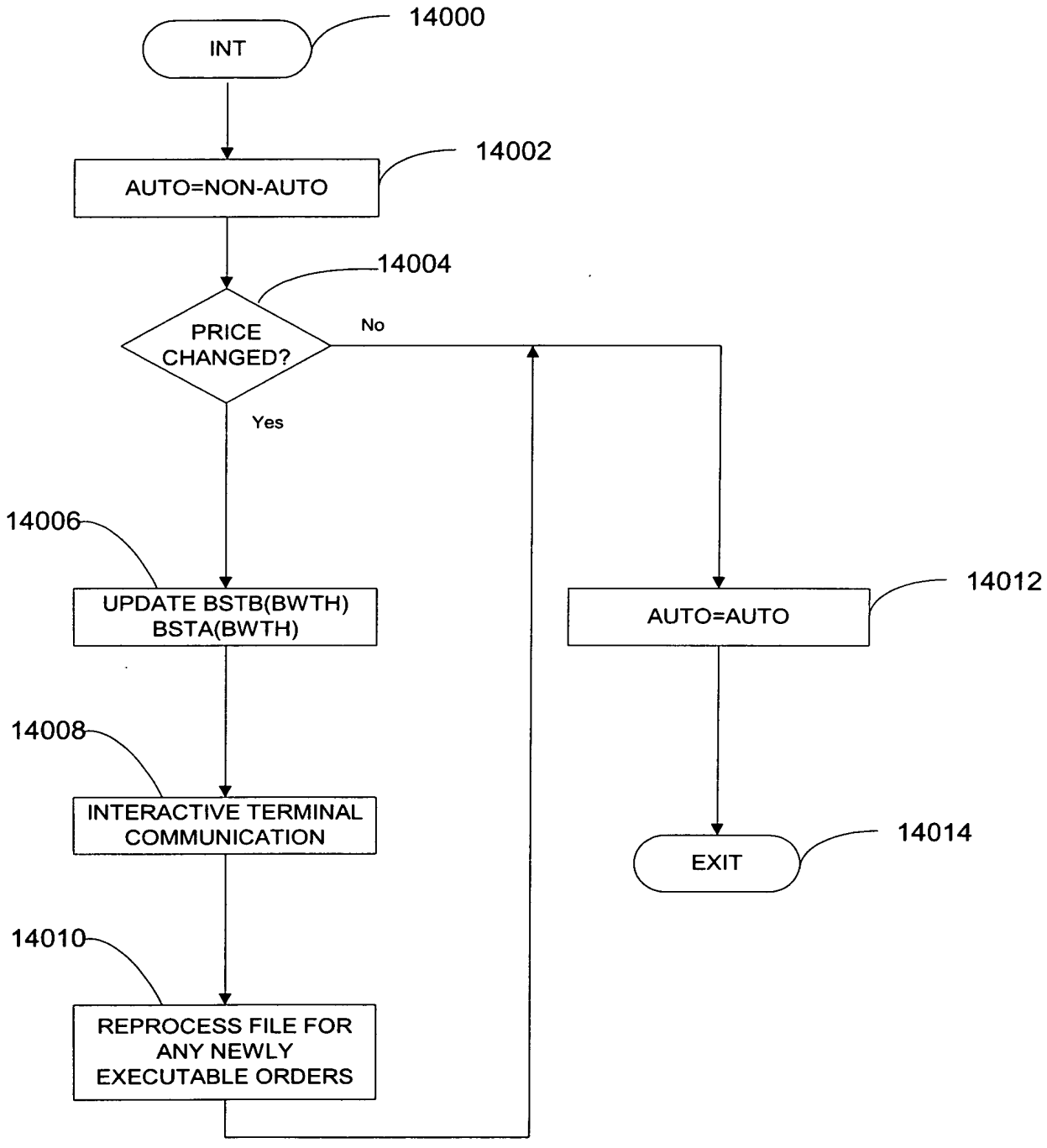

14000
INT
14002
AUTO=NON-AUTO
14004
PRICE CHANGED?
No
Yes
14006
UPDATE BSTB(BWTH) BSTA(BWTH)
14008
INTERACTIVE TERMINAL COMMUNICATION
14010
REPROCESS FILE FOR ANY NEWLY EXECUTABLE ORDERS
14012
AUTO=AUTO
14014
EXIT

Figure 140

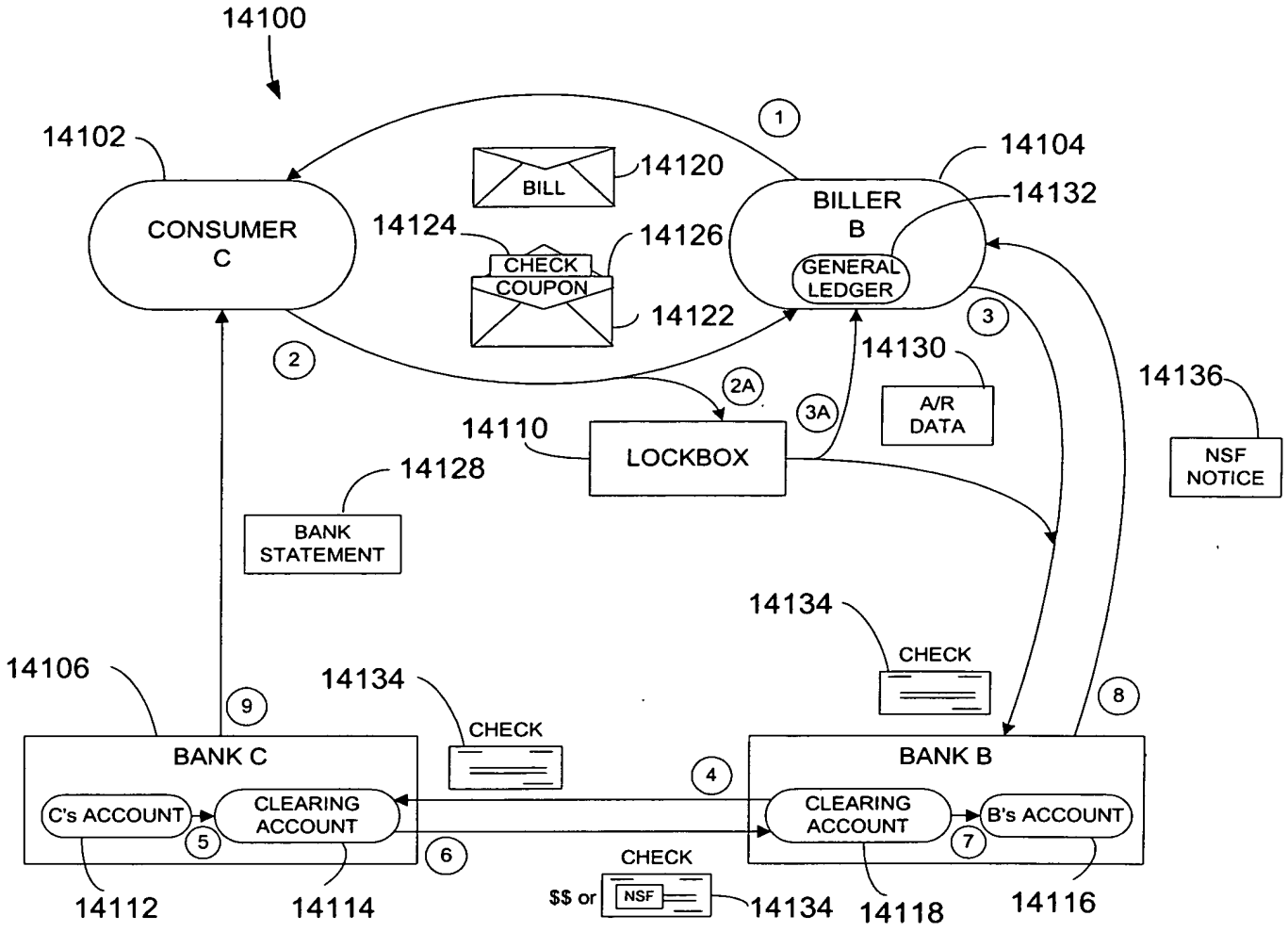

14100
14102
CONSUMER C
1
BILL
14120
14104
BILLER B
14132
14124
CHECK COUPON
14126
GENERAL LEDGER
14122
3
2
14130
14136
2A
3A
A/R DATA
14110
LOCKBOX
NSF NOTICE
14128
BANK STATEMENT
14134
CHECK
14106
14134
CHECK
9
8
BANK C
BANK B
4
C's ACCOUNT
CLEARING ACCOUNT
CLEARING ACCOUNT
B's ACCOUNT
5
6
7
CHECK
$$ or
NSF
14112
14114
14134
14118
14116

Figure 141

DOCKET DECAMAG

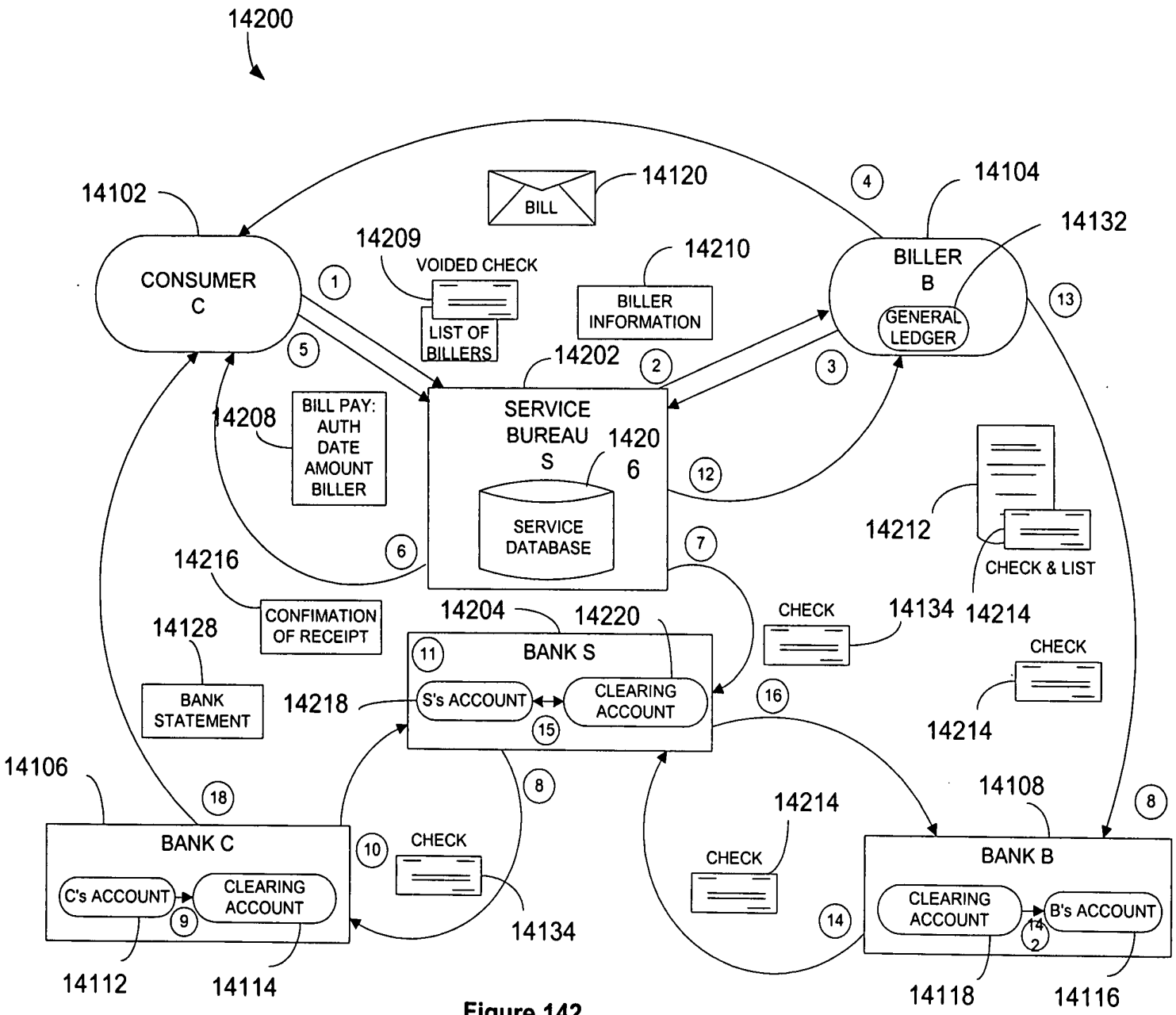


Figure 142

SCANNED

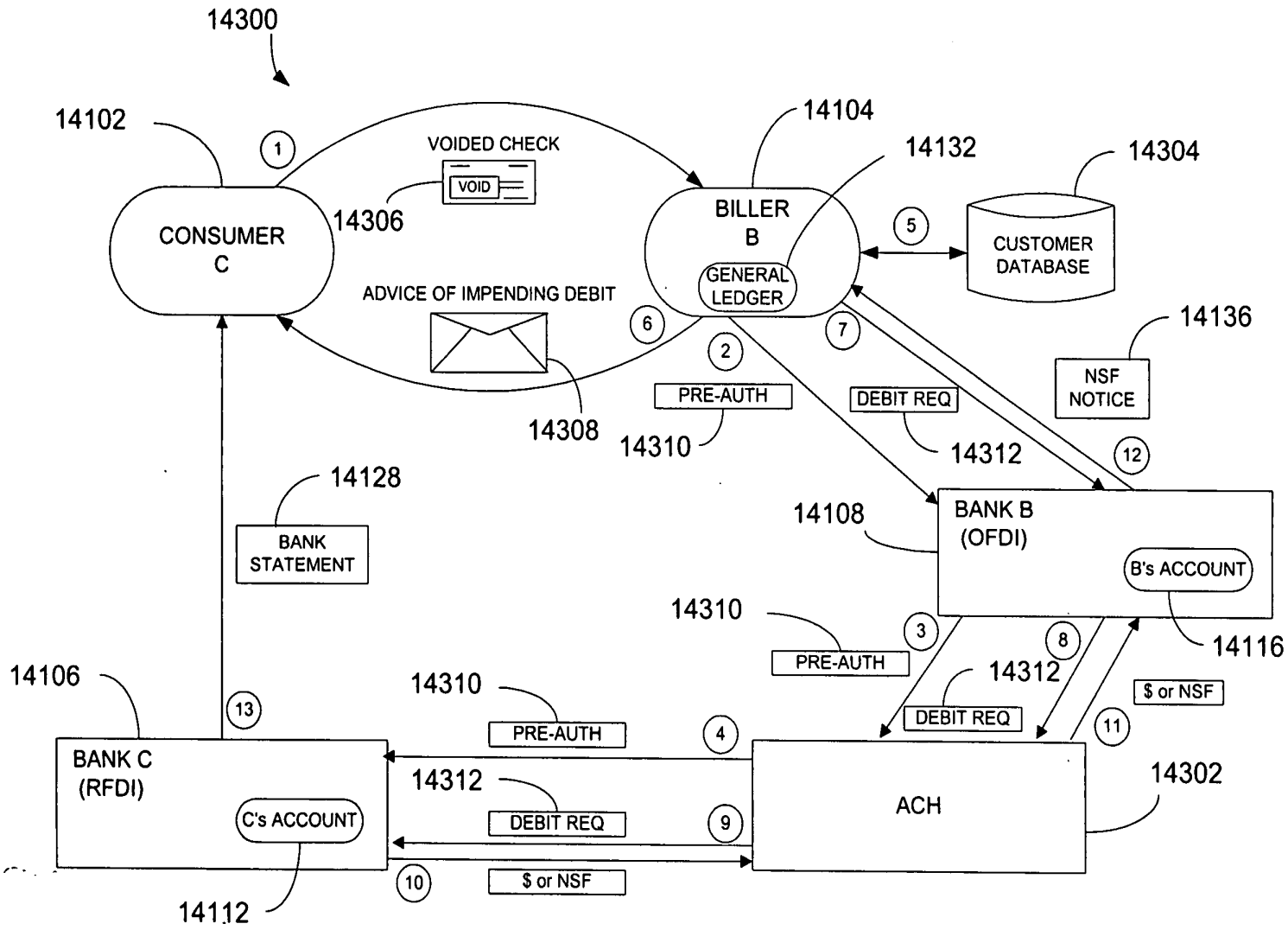


Figure 143